THE
CANADA
YEAR BOOK
1955

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THE
CANADA YEAR BOOK
1955

THE OFFICIAL STATISTICAL ANNUAL OF THE RESOURCES, HISTORY, INSTITUTIONS, AND SOCIAL AND ECONOMIC CONDITIONS OF CANADA

Published by Authority of
The Right Honourable C. D. Howe, Minister of Trade and Commerce

DOMINION BUREAU OF STATISTICS
Canada Year Book Section
Information Services Division

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PREFACE

The Canada Year Book, the official annual compendium of information on the institutions and the economic and social development of the nation, may be said to have had its origin in the "Year-Book and Almanac of British North America for 1867", although this and succeeding volumes down to 1879 were published privately but with official blessing. Upon the passage of a general Statistics Act in 1886, an official reference volume was instituted under the title "Statistical Abstract and Record of Canada" and produced by the General Statistics Office of the Department of Agriculture. With the amalgamation of the General Statistics Office and the Census Office, the Year Book was remodelled in 1905 and issued under the title "The Canada Year Book, Second Series", embracing short notes on the events of the year, tables compiled from Census and Departmental reports and a historical listing of the Ministries and other Executive Officers of the Dominion since Confederation.

The half century since the new series of Year Books was launched has witnessed manifold developments in centralized statistical organization in Canada under the Dominion Bureau of Statistics, established in 1918. As the Bureau expanded its program of statistical compilation and analysis in keeping with the nation's remarkable economic growth, each annual edition of the Canada Year Book has endeavoured to present this challenging story through special articles, extensive statistical tables and analytical commentary designed to reveal the interrelationship of the various sectors of the economy and portray within a single volume the essential economic and social elements in the progress of Canada.

Apart from the regular annual revision of textual and statistical material, chapter by chapter, a number of special feature articles of current interest have been incorporated in the 1955 edition—the fiftieth anniversary number—of the Canada Year Book. These include: "The Northland—Canada's Challenge" (pp. 22-32); "Migratory Bird Legislation" (pp. 41-45); "Post-War Immigration" (pp. 164-166); "The Forest Products Laboratories of Canada" (pp. 455-461); "Developments in Canada's Mineral Industry—The Metals, Industrial Minerals, Petroleum and Natural Gas, and Coal" (pp. 473-497); "The St. Lawrence Power Project" (pp. 549-553); "Canada's Commercial Fisheries Resources" (pp. 578-590); "The History of the Canadian National Railways" (pp. 840-851); and "The St. Lawrence Seaway" (pp. 885-888).

The extended analysis of the 1951 Census of Canada, presented in the 1952-53 and the 1954 editions of the Canada Year Book, is concluded in the current edition with a survey of the nation's Merchandising and Service Establishments.

In addition to the above-mentioned special articles, other features have been introduced and revisions made in the various chapters. Among these are a detailed treatment of Canadian physiography, an up-to-date digest of the administrative functions of the Federal Government with accompanying chart, a new survey of Federal Government employment, a brief outline of Canada's international activities during 1953-54, preliminary results of the first nation-wide Sickness Survey, short analyses of the new Canadian Criminal Code and of the decennial revision of the Bank Act, sketches of educational and cultural activities of the National Gallery,

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the National Film Board and the Canadian Broadcasting Corporation, a survey of scientific and industrial research including that in the atomic field, as well as up-to-date reviews of developments in Canada's foreign and domestic trade, manufacturing, hydro-electric power, agriculture, forestry, mining, fisheries, labour legislation, health and welfare, prices, public finance, capital expenditure on construction, machinery and equipment, insurance, the national accounts, and various aspects of the defence of Canada. Numerous diagrams, charts and maps assist in interpreting the economic development of the nation which is presented in summary fashion in the Introduction to the volume (pp. viii ff.).

The concluding chapter, entitled "Sources of Official Information and Miscellaneous Data", presents extensive reference material embracing Government information services, federal legislation, official appointments, a chronology of current events, a list of special articles published in former editions of the Year Book, and a statistical summary of the progress of Canada over a period of eighty-three years. A large folding map of Canada is enclosed in the pocket on the inside back cover of the volume.

The present volume has been produced in the Canada Year Book Section by John F. McVea, Assistant Editor of the Year Book and Chief of the Section, with the assistance of Miss M. Pink, Miss C. Freeth and the Year Book staff, under the general editorship and direction of Dr. C. C. Lingard, Director of the Information Services Division. Charts and graphs have been prepared under the direction of J. W. Delisle, Senior Draughtsman of the Bureau.

The co-operation of numerous officials of the various Departments of the Federal and Provincial Governments and of this Bureau in the preparation of material for the Year Book is hereby gratefully acknowledged. Credit by means of footnotes is given where possible either to the persons or the branches of the public service concerned.

With a view to the improvement of future editions, the Director welcomes not only information bearing on any errors or omissions that may have escaped notice but also suggestions respecting methods of treatment.

Herbert Marshall

DOMINION STATISTICIAN

DOMINION BUREAU OF STATISTICS,
Ottawa, May 3, 1955

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WEIGHTS AND MEASURES AND OTHER INTERPRETATIVE DATA

In Canada, as a rule, the Imperial system of weights and measures is followed. An exception, however, is the ton where, unless otherwise stated, the short ton of 2,000 lb. is meant. Billion, where used, represents 1,000 million.

The following table shows the weights and measures used in Canada in connection with the principal field crops and for wheat flour and fruits:—

	Pounds per Bushel
Grains—	
Wheat	60
Oats	34
Barley	48
Rye	56
Buckwheat	48
Flaxseed	56
Corn	56
Mixed grains	50
All others	60

Wheat Flour—
1 barrel equals 196 pounds and approximately 4·5 bushels of wheat are used in the production of a barrel of flour.

	Pounds
Fruits (standard conversions)—	
Apples, per barrel	135
Apples, per box	43
Pears, per bushel	50
Plums " "	50
Cherries " "	50
Peaches " "	50
Grapes " "	50
Pears, per box	42
Strawberries, per quart	1·25
Raspberries " "	1·25
Loganberries " "	1·25

Relative Weights and Measures, Imperial and United States

The following list of coefficients may be used to translate amounts expressed in one unit to the other. It must be borne in mind that where the list below refers to Imperial pint, quart and gallon, their equivalent in ounces is also in Imperial measure; likewise, United States designations for these quantities are shown in the U.S. equivalent in ounces. The Imperial (or British) fluid ounce and the U.S. fluid ounce are different measures, 1 Imperial fluid ounce equalling 0·96 United States fluid ounce. Similarly, 1 Imperial gallon equals 1·2 United States gallon.

1 Imperial pint=20 fluid ounces.
1 United States pint=16 fluid ounces.
1 Imperial quart=40 fluid ounces.
1 United States quart=32 fluid ounces.
1 Imperial gallon=160 fluid ounces.
1 United States gallon=128 fluid ounces.
1 Imperial proof gallon=1·36 United States proof gallon.
1 Short ton=2,000 pounds.
1 Long ton=2,240 pounds.
1 Barrel crude petroleum = 35 Imperial gallons.

FISCAL YEARS OF FEDERAL AND PROVINCIAL GOVERNMENTS

The fiscal year of the Federal Government and of each of the ten Provincial Governments ends on March 31.

Throughout the Year Book, fiscal-year figures are indicated in the text and headings of tables; otherwise, figures are for calendar years.

INTRODUCTION

THE CANADIAN ECONOMY IN 1954[*]

The Canadian economy was subject to a variety of adjustments in 1954, certain adverse events being largely counterbalanced by continuing expansionary influences and long-term elements of growth. The adverse factors consisted of a very poor wheat harvest, a moderately reduced defence expenditure, lower investment outlays for new machinery and equipment, a cessation of inventory expansion, a lower volume of exports (chiefly of wheat) and a lower level of consumer purchases of durable goods. These were counterbalanced to a large extent by continued gains in labour income and other forms of personal income, which in turn led to expansion of personal expenditures on consumer goods and services. There occurred also a renewed upsurge in new residential construction. Imports were lower, implying that some of the reduction in demand was counterbalanced by lower imports, rather than by reduced domestic output. On balance, the nation's output of goods and services in 1954 was 2 p.c. below that of 1953, and amounted to $24 billion. If allowances are made for the crop failure, the Gross National Product (excluding accrued net income of farm operators) was $22·9 billion as compared with $22·8 billion in 1953. Prices were generally steady throughout the year.

While activity in general was at a reduced level during the winter and early spring months, there occurred at mid-year a gradual renewal of expansion, culminating in a particularly rapid fourth-quarter increase. The aggregate level of business activity, as measured by Gross National Product (other than accrued net income of farm operators), in the fourth quarter of 1954, once again exceeded the previous peak in the third quarter of 1953.

These events were paralleled by somewhat similar developments in the United States, but certain differences should be noted. The agricultural sector is of considerably greater relative importance in Canada's economy and thus the poor 1954 crop had a large weight in the decline observed in Canada. The United States decline began one quarter sooner and lasted one quarter longer than the Canadian and may have been somewhat more severe.[†] The following paragraphs review briefly the major influences underlying economic developments in 1954. One of the most significant of these was the sharp liquidation of business inventories which began in 1954, following the substantial build-up of the previous year. The change from positive to negative inventory accumulation amounted to $0·6 billion. This reversal was related to developments during the period when inventories were being accumulated to meet growing defence requirements and the expansion in economic activity generally. As many of these expansive forces levelled off and supplies became easier, inventory holdings in certain lines became excessive and substantial liquidations followed. Thus, production of some manufactured goods was cut back in 1954 and current requirements were met out of inventory stocks.

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[*] Prepared in the Research and Development Division, Dominion Bureau of Statistics.

[†] It is difficult to compare the extent of the decline in the two countries, not only because of differences in timing but also because of conceptual differences in the measures of total output. An approximate comparison is afforded by the two estimates of Gross National Expenditure (exclusive of accrued net income of farm operators, and in the Canadian data, exclusive of residual error). According to this definition, the decline in the United States from the second quarter of 1953 to the third quarter of 1954, amounted to 4 p.c., and the Canadian data from the third quarter of 1953 to the second quarter of 1954 showed a reduction of 3 p.c.

Business investment in plant, machinery and equipment declined to $3·4 billion in 1954 from $3·8 billion in 1953, though earlier estimates of capital investment intentions had suggested a moderate increase over 1953. Unfavourable weather conditions and other developments in 1954 resulted in lower than expected non-residential construction and machinery and equipment expenditures. Additional contributing factors were the completion of a number of remote area projects and other industrial expansion programs, and lower outlays for farm machinery and equipment, the latter being related to developments in the farm sector.

Defence expenditures on the National Accounts basis declined from $1·9 billion in 1953 to $1·7 billion in 1954, reductions being concentrated in construction and in procurement of certain equipment items. This had an adverse effect in related industries. Canadian defence outlays had reached their peak in 1953 and in 1954, by contrast with immediately preceding years, were not an expansionary force.

The lower level of consumer durable goods purchases in 1954 was a furthe factor in the decline of business activity. The removal of consumer credit restraints in 1952 was accompanied by a wave of buying but, by the end of 1953, the accumulated back-log appeared to have been worked off and demand had diminished to more normal proportions. Throughout 1954, consumer purchases of durable goods remained at this lower level, namely, $1·7 billion; most types were affected by the decline, the major exception being television sets.

Despite all these adverse developments, production, other than agricultural, remained level with the previous year, reflecting the effects of a number of important counterbalancing influences. Of major significance was the continued rise in personal expenditure on non-durable consumer goods and services which rose from $13·3 billion in 1953 to $13·9 billion in 1954. This increase was sufficient to raise the total of consumer expenditures above the 1953 level by about 3 p.c., and to offset an important part of the decline for consumer durables.

A further expansionary influence in 1954 was the fact that housing construction reached an all-time record of $1·2 billion. Related to this continued growth municipal government expenditures were higher than in 1953 to meet the greater demands for local improvements and services such as roads, streets, sewage and water facilities, schools and hospitals.

These sources of strength in the economy in 1954 were related to three factors: (1) continued growth in population generated new demands for consumer goods and services, and for housing; (2) further impetus to new housing was given through a change in the National Housing Act in early 1954 reducing down-payment requirements and extending the re-payment period, and through a change in the Bank Act permitting the chartered banks to make loans on home mortgages; and (3) personal income was at a high level throughout 1954—an important factor in the continued expansion of consumer demand. It may be noted that, in 1952 and 1953, personal income rose by 15 p.c., while retail prices were relatively unchanged. The resulting gain in 'real' wages supported a large volume of increased buying in these years, as well as a high level of personal saving. In 1954, despite the poor wheat crop and a slightly lower level of employment, personal income remained relatively stable—a development associated with higher average hourly earnings and an increase in transfer payments from government. In addition, although the level of profits was below that of the previous year, dividend payments to investors were maintained. Net personal rental income increased as the housing stock grew and as rents increased. Interest payments to persons also continued to rise.

An additional factor in the 1954 situation was the decline in imports of goods and services from \$5·9 billion in 1953 to \$5·6 billion in 1954. At a time when Canadian demand for certain types of goods and services was weakening, the effect on Canadian output was somewhat mitigated, at least to the extent that such declines were matched by a cut-back in imports of foreign-produced goods and services.

The over-all effect of these counterbalancing tendencies was to leave total Canadian output, apart from the farm sector, at approximately the same level as in 1953. On the other hand, the over-all level of non-agricultural employment was about 1 p.c. lower. Manufacturing employment declined by 5 p.c., consisting of an 8-p.c. reduction in the durable goods industries and a 3-p.c. in the non-durable goods industries. The average number of hours of work per week in manufacturing was 2 p.c. lower. These declines were only partly offset by the continued growth of employment in the service industries. On balance, with a slightly lower employment level, and an increase in both the population and the labour force between 1953 and 1954, there was some increase in unemployment. The number of persons without jobs and seeking work constituted 4·3 p.c. of the labour force, when averaged over 12 months, compared with 2·6 p.c. in the preceding year.

Prices were comparatively stable in 1954, with the exception of those for certain farm products. The sharp rise in world prices in 1950 and 1951 which accompanied the outbreak of hostilities in Korea was followed by a decline ending in 1952. Since that time, the general level of prices in Canada has shown little change. The consumer price index in 1954 was approximately unchanged from 1953 and 1952, but the index of wholesale prices was 1·5 p.c. below 1953 and 4 p.c. below 1952. Increased world output of both raw materials and manufactured goods and the renewed competitive vigour of international trade were major factors in the stability of prices. Export prices were slightly lower in 1954 than in the preceding year and import prices were slightly higher so that there was a small deterioration in the terms of trade.

INDUSTRIAL PRODUCTION

An analysis of Canadian production by industry in 1954 shows that substantial shifts occurred in the composition of output in 1954 as compared with 1953. In the first nine months of 1954, total manufacturing production was 5 p.c. below the 1953 level. Declines were widespread in the durable goods field, where a drop of 9 p.c. occurred. This development reflected inventory liquidations, the reduction in defence spending, falling purchases of consumer durable items, and reduced investment in new farm and other machinery and equipment. Production of primary iron and steel products and motor vehicles each declined by 23 p.c. Activity in the electrical apparatus and supplies industry showed a more moderate decline, reduced output in some fields being offset by a sharp increase in the production of television sets.

In the non-durable goods sector, a reduction in output of 1 p.c. occurred, associated mainly with a drop in output of clothing and textiles; at the same time, there were substantial liquidations of inventories of clothing and textile products.

Partly offsetting this decline were the higher outputs recorded by foods and beverages, chemical products, tobacco products, paper products and petroleum products industries. Many of these gains were associated with higher consumer purchases, though others were related to the growth in resource development.

In the primary industries, the substantial decline in agricultural output was wholly attributable to the great drop in grain output, as production of live stock, poultry, eggs and dairy products recorded advances over 1953.

Operations in the woods showed a moderate increase; declines in logging operations occasioned by reduced activity in sawmills and shingle mills were more than offset by an increase of 19 p.c. in pulpwood production. In the second half of 1954, vigorous housing programs in Canada and the United States, together with a rising level of industrial production in the United Kingdom, stimulated demand for Canadian wood products. A moderate gain was also recorded in primary fisheries operations, the result largely of increased cod landings off the Atlantic Coast and the plentiful run of sockeye salmon in British Columbia.

One of the most significant advances in output occurred in mineral production which rose by more than 10 p.c. in the first nine months of 1954. Output of metals increased by 4 p.c.; copper, nickel and lead showed substantial advances and zinc and gold production, although lower than in 1953, showed improvement by mid-year. The increases in metals production were related to stronger export demand reflecting, in turn, a high level of economic activity in the United Kingdom, work stoppages of Chilean and United States copper producers, and a resumption of United States Government stockpiling of zinc and lead. Output of crude petroleum and natural gas continued to show marked gains, as resource development in Alberta continued strong, but coal output, on the other hand, continued to decline. Coal production reached the lowest level in seven years, as other sources of energy were increasingly substituted for it.

In the public utilities sector, production of electric power continued to advance, gaining about 3 p.c. over 1953. Distribution of natural gas increased sharply, but production and sales of manufactured gas rose very little.

On balance, the output of primary goods industries, other than agriculture, was appreciably higher than in 1953.

The general level of construction activity in 1954 was about the same as in 1953. Housing construction showed an appreciable gain but declines in other sectors of construction were offsetting factors. Unfavourable weather conditions and the fact that work was completed on several important resource development projects affected the level of industrial construction in 1954.

While the combined output of goods in 1954 was slightly lower than in the preceding year, services continued to expand. All groups showed increases with the exception of transportation, communication and storage. This latter group declined as a result of reduced shipments of grain and lower shipments of automobiles, machinery, and primary iron and steel products. These declines were partly offset by long-run growth factors in a number of component sub-groups: activity in air and truck transportation and oil pipelines increased; the communications groups also increased as a result of the continued growth in telephone and telegraph services and the rapid expansion in television transmission stations.

Retail and wholesale trade activity rose fractionally in 1954, as a lower volume of sales by motor-vehicle dealers, clothing and shoe stores and some other trades was more than offset by rising sales of food stores, department and variety stores, garages and filling stations and other businesses. Government, health, educational, recreational and business services recorded advances over the 1953 level.

National Income and Gross National Product

Wages, salaries and supplementary labour income amounted to \$11·9 billion in 1954, an increase of 2 p.c. over 1953. Gains occurred in most of the primary industries (except agriculture) and in all of the service groups including public utilities, trade, finance, and other services; the increase in the service components was much higher than that for other industries. On the other hand, wages and salaries in transportation, storage and communication, and in manufacturing declined in the year-to-year comparison. Payroll declines in manufacturing, ranging from 6 p.c. to 10 p.c., were concentrated in iron and steel products, transportation equipment, and clothing, textile and leather products industries. Despite these particular declines, the trend of *total* wages and salaries throughout the year was steadily upward. By the fourth quarter, they were 2 p.c. above the 1954 average, paralleling the increase for the year as a whole.

The total of investment income, which includes corporation profits, interest, net rents and government investment income, amounted to \$3·7 billion in 1954, a decline of approximately 2 p.c. from 1953. Corporation profits, the major component of investment income, is estimated to have declined by about 6 p.c. for the year. Interest and net rental receipts of persons rose by about 12 p.c. in 1954, reflecting increases in average rents, the growth in the number of housing units, and higher deposit interest paid by banks. Government investment income showed little change from 1953, but higher interest receipts were an approximate offset to a decline in profits of government enterprises. Throughout 1954, investment income (seasonally adjusted) was relatively stable, following declines in the last half of 1953. Corporation profits, which had been declining throughout most of 1953, levelled off early in 1954 and showed little change throughout the remainder of the year.

Accrued net income of farm operators from farm production was \$1·1 billion in 1954, a decline of about one-third from \$1·6 billion in 1953. This decline was approximately accounted for by the drop of \$0·5 billion in the value of crop production, which reflected adverse weather conditions in the Western Provinces and severe rust damage to the grain crop. The year 1953, however, produced the second largest grain crop in Canadian history, so that the decline in 1954 represents a drop from a very high base. Moreover, cash income from the sale of farm products declined much less sharply in 1954, partly reflecting the fact that grain deliveries did not drop as sharply as crop production. The decrease in cash income in 1954 amounted to 12 p.c. In contrast to the decline in grain output, the production of live stock increased in 1954, and with prices only slightly lower, there was some increase in income from this source. Cash income from fruits, vegetables and dairy products was unchanged from the previous year.

Net income of non-farm unincorporated business in 1954, at $1·6 billion, was about 3 p.c. below the preceding year. The decline was concentrated in manufacturing and retail trade; gains occurred in other groups, with the major gains showing up in net income from professional service and the construction industry, the latter being related to the higher level of house building in 1954.

Indirect taxes, less subsidies, amounted to $2·9 billion in 1954, relatively unchanged from the 1953 level. However, there were a number of significant shifts among the components. At the federal level, indirect taxes declined by 5 p.c., mainly accounted for by lower excise tax collections and by a drop in customs import duties; the declines in these components were 5 p.c. and 7 p.c., respectively, and were associated with lower levels of factory shipments of goods, particularly durables, as well as with a drop in imports. Changes in tax rates introduced in the 1954 Budget were also a contributing factor in the decline. Accompanying the drop in federal indirect taxes, subsidies were also somewhat lower in 1954 than in the preceding year. At the provincial level, indirect taxes showed an increase of 6 p.c., accounted for by gains in gasoline and retail sales taxes. A gain of 6 p.c. in municipal taxes reflected higher receipts from real and personal property taxes.

Depreciation allowances and similar business costs increased by 5 p.c. in 1954 to reach a total of $2·5 billion. Almost all of the increase was the result of higher corporation depreciation, mining development write-offs, and depreciation charges for residential and non-residential real estate.

Components of Final Demand

As previously noted, consumer expenditure and investment in new residential construction were the two important sustaining forces on the expenditure side in 1954. During the period of the down-turn in production, from mid-1953 to mid-1954, the declines in the seasonally adjusted expenditure components were particularly sharp, but from mid-1954 to the end of the year all of the expenditure items were rising, with the exception of outlays for new machinery and equipment. These developments are discussed in greater detail below.

The major expansionary force in the economy in 1954 was personal expenditure on consumer goods and services which rose by 3 p.c., from $15·1 billion in 1953 to $15·6 billion in 1954. This increase was associated with a continuing high level of personal disposable income and a drop in the proportion of income saved. Expenditures for services and non-durable goods were higher in 1954, by 6 p.c. and 3 p.c. respectively, but expenditures for durable goods declined by 6 p.c. With prices slightly higher than in the preceding year, the volume increase in total personal expenditure amounted to about 2 p.c.

The major gain in non-durable goods purchases in 1954 was in the food component which rose by 5 p.c. Purchases of clothing declined by 5 p.c., while expenditure on tobacco and alcoholic beverages remained unchanged. In volume terms, non-durable goods purchases as a whole showed approximately the same increase as is indicated by the value figures.

In the durable goods group, the declines, though widespread, were especially marked in purchases of new automobiles which fell by 12 p.c. Purchases of most types of household appliances and furniture also declined, and domestic shipments of washing machines and refrigerators were down by 9 p.c. and 12 p.c., respectively, from the previous year; imports of refrigerators showed a drop of 42 p.c. The declines in these and other durable goods purchases were partially offset by higher sales of television sets, domestic shipments of which increased by 45 p.c. over 1953. With prices for durable goods as a whole slightly below the previous year, it is estimated that the volume of purchases declined by about 5 p.c.

Most of the service groups showed increases in 1954, with major gains occurring in expenditures for household operations and utilities, and for shelter. Outlays for user-operated transportation, medical care, education and personal care were also higher in 1954.

Expenditure for goods and services by all levels of government (federal, provincial and municipal) remained practically unchanged in 1954, at approximately \$4·4 billion. At the federal level, a decline of more than \$100 million, or 5 p.c., was offset by gains of 5 p.c. and 7 p.c., respectively, in provincial and municipal government expenditures. It may be noted that federal defence expenditure for 1954 amounted to \$1·7 billion compared with \$1·9 billion in 1953, a drop of 9 p.c. (on the National Accounts basis); this decline was only partly offset by increases in federal non-defence outlays. An increase in provincial government expenditure on goods and services reflected larger public investment outlays, while the increase in municipal government expenditures appears to be associated with the high volume of new housing construction in 1954 which increased the demand for roads, schools, and water and sewage facilities.

The steady growth in outlays for capital goods which has been a prominent feature of the post-war period was interrupted in 1954. Gross domestic investment (excluding inventory investment) declined from \$4·8 billion in 1953 to \$4·5 billion, a drop of 6 p.c. This decline was more than accounted for by sharply reduced outlays for machinery and equipment (off by 17 p.c.) and by somewhat smaller expenditures for new non-residential construction (off by 3 p.c.). On the other hand, outlays for new housing continued to increase, with a gain of 9 p.c. over 1953.

The decline in business outlays for plant, machinery and equipment was fairly widespread. Heaviest individual declines occurred in manufacturing, agriculture, fishing and utilities. Smaller declines occurred in mining, quarrying and oil wells, and in the construction industry. Partially offsetting these reductions, increases were recorded for trade, finance and commercial services, with smaller gains occurring in forestry and non-government institutions.

During 1954, inventory changes were a dominating influence in the movement of total production. The volatility of this component, and the rapidity with which changes can occur in the inventory field, make it especially significant in the quarter-to-quarter movements in Gross National Product. Moreover, inventory developments were of major importance in the changes that took place in the annual levels of production in certain industries between 1953 and 1954. From one year to the next, the inventory sector shifted from a position of substantial net accumulation (amounting to \$605 million), to a position of net liquidation (\$230 million). This represented a turn-around of approximately \$800 million, or 3 p.c. of Gross National Product, of which more than one-half, or nearly \$0·5 billion, was attributable to movements in business inventories; the remainder was accounted for by depletions in grain and farm-held inventories in 1954 compared with some accumulation in the previous year. The business inventory changeover occurred almost entirely within the manufacturing sector; the changes were most pronounced in the metal-using industries (iron and steel products and transportation equipment) and in the textile and clothing industries. These were the industries that showed the largest production declines in 1954, and in which imports were cut back most sharply.

By the fourth quarter, however, liquidations no longer appeared to be in evidence and a small accumulation was taking place. This reversal in the inventory sector amounted to $0·4 billion and, together with generally rising outlays in other components of Gross National Expenditure, brought the level of total output to a rate of $24·4 billion in the final quarter of the year.

Exports of goods and services declined from $5·4 billion in 1953 to $5·1 billion in 1954, or by 5 p.c., owing largely to a drop of nearly $0·3 billion in exports of grains and flour. Non-grain exports were well maintained in 1954, with declines in motor vehicles, primary iron and steel products, and a few defence exports being offset by increases in newsprint, pulp, planks and boards, most base metals, fishery products and chemical products. Receipts from services also showed declines with the largest drop occurring in freight and shipping services.

Imports of goods and services also declined in 1954, from $5·9 billion in 1953 to $5·6 billion, or by 5 p.c. Almost three-quarters of this decline was concentrated in imports of iron and its products. Large reductions also occurred in imports of non-metallic minerals and in imports of fibres and textiles. Particular items affected were agricultural implements, and machinery and equipment items. Large increases in imports were few in 1954 and were limited mainly to food products. Among the invisible or service items, increases in tourist expenditures and in interest and dividend payments abroad largely offset the drop in payments for freight and shipping services.

For the year 1954 as a whole, the deficit on current account was slightly smaller than in 1953, amounting to about $0·4 billion. The Canadian dollar in terms of U.S. dollars continued strong, being quoted at a premium of several cents throughout the year. However, this margin was beginning to close at the end of 1954, and particularly in the first two months of 1955.

SYMBOLS

The interpretation of the symbols used in the tables throughout this publication is as follows:—

. . figures not available.

... figures not appropriate or not applicable.

— nil or zero.

- - amount too small to be expressed or where "a trace" is meant.

^{p} preliminary figures.

^{r} revised figures.

N.B.:— Instead of establishing a holding company as envisaged at page 363, paragraphs 2 and 3, provision was made in the Statutes of Canada 1953-54, c. 47 for both companies to report to the Minister mentioned in the text.

CHAPTER I.—PHYSIOGRAPHY AND RELATED SCIENCES

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found on the facing page.*

PART I.—GEOGRAPHY*

Canada comprises the greater part of the northern half of North America lying between the United States, Alaska and Greenland. In longitude Canada extends from Cape Spear, Newfoundland, at 52°37′W, to Mount St. Elias, Yukon Territory, at 141°W, a distance of 88°23′. In latitude it stretches from Middle Island, Lake Erie, at 41°41′N, to the North Pole. The northernmost point of land is Cape Columbia on Ellesmere Island, at 83°07′N. Thus, Canada is essentially a western and a northern country, a fact of increasing strategic significance. Moreover, its limits have drawn out the climatic, vegetation and soil belts into broad east-west zones, thereby supporting the east-west orientation of the main frontier of the country and aiding Canada's historic east-west development.

The shape of Canada is like a distorted parallelogram, with its four corners making important salients. In the north, the salient formed by the Arctic Archipelago, which penetrates deep into the Arctic basin, guards the northern approaches to the continent from Europe and Asia and makes Canada neighbour to the Union of Soviet Socialist Republics. In the south, the salient of peninsular Ontario thrusts far into the heart of the United States. In the east, the salient of Labrador and the Island of Newfoundland commands the shortest crossings of the North Atlantic Ocean and links Canada geographically with the United Kingdom and France. In the west, the broad arc of land between Vancouver in southern British Columbia and Whitehorse in Yukon Territory provides the shortest crossings of the North

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* Prepared by the Geographical Branch, Department of Mines and Technical Surveys, Ottawa.

Pacific Ocean between continental North America and the Far East. Canada thus stands at the crossroads of contacts with the principal powers and some of the most populous areas of the world.

In size, Canada is the largest country in the Western Hemisphere and the second largest country in the world. Its area of 3,845,774 sq. miles may be compared with that of the Union of Soviet Socialist Republics, 8,598,701 sq. miles;* the United States of America (including Alaska), 3,608,653 sq. miles;* and Brazil, 3,288,050 sq. miles.* It is more than forty times the size of the United Kingdom and eighteen times the size of France. This immense size, however, while multiplying certain resources and seeming to afford much scope for settlement, has imposed its own burdens and limitations, particularly because much of the land is mountainous and rocky or is under an Arctic climate. The developed portion is probably not more than one-third of the total; the occupied farm land is only 7·6 p.c. and the currently accessible forested land 16·1 p.c. of the total. The population of Canada, estimated at 15,195,000 on June 1, 1954, may be compared with 159,696,000* for the United States (1953) and with 55,772,000 for Brazil (1953).*

1.—Approximate Land and Fresh-Water Areas, by Province and Territory

NOTE.—A classification of land area as agricultural, forested, etc., is given at p. 20.

Province or Territory	Land	Fresh Water	Total	Percentage of Total Area
	sq. miles	sq. miles	sq. miles	
Newfoundland (incl. Labrador)	147,994	7,370	155,364	4·0
Prince Edward Island	2,184	--	2,184	0·1
Nova Scotia	20,743	325	21,068	0·6
New Brunswick	27,473	512	27,985	0·7
Quebec	523,860	71,000	594,860	15·5
Ontario	348,141	64,441	412,582	10·7
Manitoba	219,723	26,789	246,512	6·4
Saskatchewan	220,182	31,518	251,700	6·6
Alberta	248,800	6,485	255,285	6·6
British Columbia	359,279	6,976	366,255	9·5
Yukon Territory	205,346	1,730	207,076	5·4
Northwest Territories	1,253,438	51,465	1,304,903	33·9
Franklin	*541,753*	*7,500*	*549,253*	*14·3*
Keewatin	*218,460*	*9,700*	*228,160*	*5·9*
Mackenzie	*493,225*	*34,265*	*527,490*	*13·7*
Canada	**3,577,163**	**268,611**	**3,845,774**	**100·0**

Section 1.—Physical Geography

Subsection 1.—Physiographic Divisions

Canada includes each of the major characteristic structures of the North American continent, with the exception of the Atlantic coastal plain. Structure tends to dominate relief to a remarkable degree, even though its effects have been modified by glacial and river erosion or deposition. Consequently, structural regions have become main physiographic divisions. Basically, Canada consists of a central rocky upland, or shield, sloping down to flanking basins filled with sedimentary strata and rising again at its margins to mountains of folded rocks, interspersed with igneous intrusions.

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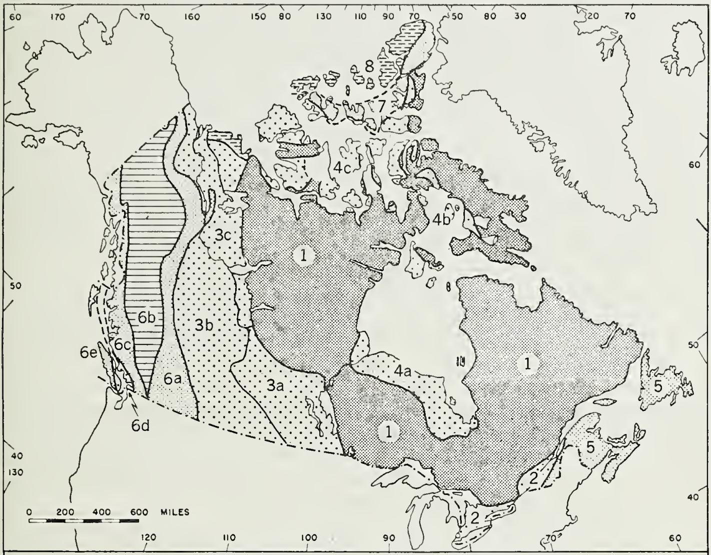
* *United Nations Statistical Yearbook, 1953.*

Eight physiographic regions dominate the country: (1) The Canadian Shield; (2) the Lower Great Lakes-St. Lawrence Lowlands; (3) the Western Interior Lowlands of the Prairies and the Mackenzie basin; (4) the Northern Interior, that is, Hudson Bay Lowlands and those of the southern Arctic Archipelago; (5) the mountains of the Canadian Appalachians; (6) the Western Cordilleras; (7) the Arctic ranges, the proposed name for which is the Innuitias; and (8) the Arctic Coastal Plain*.



PHYSIOGRAPHIC REGIONS OF CANADA

1. Canadian Shield
2. Lower Great Lakes — St Lawrence lowland
3. Western Interior lowlands:
   a. Central lowlands
   b. High plains
   c. Mackenzie lowlands
4. Northern Interior lowlands:
   a. Hudson Bay lowlands
   b. Foxe basin "
   c. Southern Archipelago lowlands
5. Canadian Appalachians
6. Western Cordilleras:
   a. Rockies
   b. Interior Plateau and Massifs
   c. Coast Range
   d. Inner Passage
   e. Insular Mountains
7. Innuitias
8. Arctic coastal plain

The Canadian Shield.—The Canadian Shield, covering an area of about 1,850,000 sq. miles, or nearly one-half the country, is the core of the continent. Broad in the north, between Davis Strait and the Mackenzie basin, it tapers towards its southern extremity in Minnesota. Its eastern edge is tilted up to present the Torngat Mountains of Labrador and the mountains of Baffin Island, with heights of over 5,000 feet. The southern and western sides form much lower uplands, of from 600 to 1,200 feet. They are broken by faults and end in a zone of lake-filled basins, including the Great Lakes, Winnipeg, Athabasca, Great Slave and Great

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* *See* reference, p. 10.

Bear lakes. The north consists of a series of low prongs, like the Melville and Boothia peninsulas, flanked by channels and islands. The centre of the Shield has been depressed and is occupied by Hudson Bay and its arms and outlets. The whole makes up a knubbly, rocky plateau with old worn-down mountains above and enclosed plains beneath its general surface.

The rocks of the Shield comprise two series, the Archæan and Proterozoic, including very ancient sedimentaries, together with igneous intrusions, and metamorphic belts. The Archæan rocks are dominantly crystalline in the form of massive domes of from 1,200 to 1,400 feet high; they also embrace small sedimentary depressions. The Proterozoic rocks are mainly sedimentary and often lie in wide, shallow basins, 600 feet or more below the surrounding uplands. The more important of these are the Coppermine, Thelon, Athabasca and Dubawnt plains in the northwest, the Port Arthur lowland in the southwest, and the Mistassini plain and Ungava trough in the east. The Proterozoics were frequently squeezed up into ranges of fold mountains such as the Bear and Snare Mountains south of Great Bear Lake, the Slave and Nonacho Mountains south of Great Slave Lake, the Athabasca and Tazin Mountains, east of Lake Athabasca, the Cuyuna and Penokean Mountains to the north and south of Lake Superior, the La Cloche Mountains north of Lake Huron and, finally, the Ungava Mountains in central Labrador.

The Shield may be subdivided on the basis of changes in the trend of rocks from place to place. In the south there lies the Grenville province, with an over-all trend from southwest to northeast. North of a line through Lake Nipissing and Lake Mistassini, occurs the Superior province with a west-east trend. It extends north from Lake Superior to about the Nelson River west of Hudson Bay and Great Whale River east of the Bay. The Ungava province occupies the northeast, with a west-southwest to east-northeast trend. Its counterpart is the Churchill province, between Lake Winnipeg and the Dubawnt plain, with a southwest to northeast trend. Finally, in the far northwest is the Slave province where the rocks trend from south-southwest to north-northeast.

The whole of the Shield has been glaciated. Current opinion favours Baffin Island and the high eastern rim of the Shield as the main source of ice; the ice sheets spread out, however, far to the west and south, pushing across to the Rockies, practically to the confluence of the Mississippi and Ohio Rivers, and to Long Island. The ice deepened pre-existing valleys, scooped out some of the softer plains, wore down ridges and spread quantities of debris. As it melted away it created huge frontal lakes, such as the predecessors of the Great Lakes, of the western lakes, and of the various 'clay belts', that now occupy hollows in the Shield. These lakes left behind extremely valuable lacustrine clays and beach gravels that have given the Shield the few agricultural areas it possesses. Post-glacial rivers, too, have benefited from the ice-cut or ice-ponded lakes, obtaining a large volume and a steady flow that make them ideal for hydro-electric development.

Shield structures the world over are peculiarly favourable to metal formation. Thus the Canadian Shield is Canada's principal source of iron, gold, nickel and radio-active metals and has also important supplies of copper, lead and zinc. Recent strides made in the exploitation of these mineral deposits as well as in the development of the vast forest and water-power resources of the area have attracted settlement as never before. The new communities afford important markets for the agricultural produce of the western provinces and the manufactured goods of Ontario and Quebec, and thus the resources of the Shield constitute a factor in cementing together the eastern and western portions of the country. In the north, however, climatic conditions and inaccessibility have prevented extensive colonization.

The Lower Great Lakes-St. Lawrence Lowlands.—Flanking the Shield to the south and southeast they consist of gently dipping or almost flat strata of Palæozoic sediments. Laid down in epi-continental seas in beds of mud (shale), sand and limestone, these strata produced a belted lowland with distinctive though subdued relief. The belts of shale form low vales and the belts of limestone stand up as prominent scarps, the most famous of which is the Niagara Escarpment. The whole region was greatly modified by ice and, as the ice melted, depressions became lakes. The glacial lakes were much larger than those of to-day. Glacial Lake Algonquin covered the three upper Great Lakes, together with Lakes Nipigon and Nipissing. It flowed out to the sea by the Mattawa-Ottawa and the Trent river valleys. When it receded it left behind important plains at Port Arthur, Nipigon and North Bay. Lake Erie developed from a succession of glacial lakes at different levels and consequently is surrounded by a number of sandy deltaic deposits, beach ridges and lacustrine flats, each of which has its own role in diversifying agriculture. Lake Ontario is the successor to Lake Iroquois and is surrounded by the old Iroquois beach which stands out everywhere and provides sites for roads and settlements. Farther east, the lower Ottawa and St. Lawrence valleys were invaded first by glacial Lake Champlain and then by the Champlain Sea. Here also, deltaic sands, beach gravels and lake-bottom clays play a pronounced part in agriculture and in the distribution of settlement. The ice left large terminal or inter-lobate moraines, the most significant of which are the Horseshoe moraine in southwest Ontario and the Oak Ridge moraine in central Ontario. These provide catchment basins for many small rivers.

The Lowlands may be divided into four sub-regions: Southwest Ontario, west of the Niagara Escarpment; Central Ontario, between the Escarpment and the Rideau Hills [these are a spur of the Shield (the Frontenac axis) between the Algonquins and the Adirondacks]; Eastern Ontario and the Montreal Plain; and the estuarine plains of Quebec and Anticosti Island.

The Lowlands are poorly endowed with fuel and other mineral resources, except for the natural gas fields and the salt deposits of southwest Ontario. However, the area is the most southerly part of Canada, has a very favourable climate and good grey-brown soils, and is therefore very productive. The immense water-power potential of the Niagara and St. Lawrence Rivers and of the rivers plunging down from the Shield or the Appalachians is a major asset. Although the Lowlands comprise Canada's smallest region, they support nearly two-thirds of the country's population.

The Western Interior (Prairies and Mackenzie) Lowlands.—The largest plains in Canada, they occupy a truly continental depression between the Shield and the Rocky Mountains, long the site of shallow seas that expanded and contracted from Palæozoic to Cenozoic times. Sedimentary rocks laid down by rivers and by these seas in almost horizontal strata dominate the scene. They have been attacked, since, by differential erosion, the softer beds being worked down into basins and the harder beds standing up as intervening scarps.

The Prairies have thus come to occupy three levels or steps. The lowest consists of the Manitoba plain, of Palæozoic rocks, dipping gently away from the Shield. This step is at an elevation of from 600 to 900 feet. Much of it is floored by fertile glacial clays and beach ridges left by glacial Lake Agassiz that once filled the Red and Assiniboine Rivers and the flats around Lakes Winnipeg, Manitoba and Winnipegosis. It gives way, westward, to the great Cretaceous escarpment known as the Manitoba Scarp. This Scarp has been cut into deeply by the Assiniboine, Swan and Saskatchewan Rivers and really exists as a series of uplands of from 1,600 to 2,600 feet high called the Turtle, Riding, Duck, Porcupine and Pasquia Mountains.

The second Prairie step stretches westward from this Scarp at a mean altitude of 2,000 feet. It, too, was glaciated. When the ice retreated large glacial lakes were left, known as Lakes Souris, Regina and Saskatoon. Lake-bed deposits to-day form some of the flattest and most fertile areas. Elsewhere, the ground is rather hummocky, with innumerable sloughs. Another great scarp occurs west of Weyburn and Moose Jaw; it is a continuation of the Missouri Coteau, a well-marked feature in the United States, and is divided by great re-entrants into individual sectors, the most important of which are Wood and Bear Mountains.

West of the Coteau extends the third and highest Prairie step with an altitude of between 3,000 and 4,300 feet. In the south it is quite hilly, where the Cypress Hills rise above it to shed the waters into the Saskatchewan or Missouri basins. Covered with till, it has generally a slightly rolling surface, suited particularly to ranching. Old glacial lakes along the Bow and Oldman Rivers provide excellent agricultural areas, as do outwash plains in front of the moraines between Calgary and Edmonton.

The three Prairie steps are united by the great arms of the Saskatchewan River flowing from the Rockies to Lake Winnipeg, and also by the soil zones which form broad west-east arcs. Railways, roads and crop-belts accentuate these natural ties. So also do the coal, oil and gas fields. The Prairies are underlain by Canada's chief fuel-bearing rocks. From Estevan through Drumheller to Macleod are a succession of coal fields. Southwest Manitoba and south Saskatchewan lie on the edge of the Williston oil basin. Western Alberta is the site of another large oil field. Gas is important in southern Alberta and in the Peace River district.

A low divide of moraine-capped hills separates the Prairies from the Mackenzie Lowland. This huge area, 1,100 miles long and as wide as 300 miles, consists of an asymmetrical plain, tilted from plateau-like levels in the west, at 4,000 feet, to basin-like stretches in the east, at 500 feet. The main channel follows the eastern depression. Long, rapid, deeply entrenched tributaries, such as the Athabasca, Peace, Liard, Arctic Red and Peel Rivers, come in from the west. Where the Lowland meets the Shield, a few pronounced hollows occur, filled with great lakes. These were much larger during glacial times and consequently glacial-lake beds are exposed all around Lesser Slave, Athabasca, Great Slave and Great Bear Lakes; the more southerly of these areas provide reasonably good agricultural or forest lands. The Athabasca and Peace Rivers, emptying into glacial Lake Athabasca, formed extensive sand deltas; an even larger delta of this type is the one formed by the Slave River at Great Slave Lake. The Mackenzie delta is one of the largest on the continent.

Though the southern part of the Lowland, particularly in the Peace River district, forms good agricultural land, the northern part is climatically unsuited to commercial farming. The lead and zinc deposits at Pine Point and the oil field at Norman Wells, together with oil potential in the middle Mackenzie and Peel basins, are valuable northern assets.

The Northern Interior (Hudson Bay and Inner Arctic) Lowlands.—Palæozoic sedimentaries, they dip gently north from the main height of land between the Hudson Bay and Great Lakes drainage basins. They are thus a parallel structure to that of the St. Lawrence Lowlands, but there the likeness ends. In the past, marine transgression buried the northern Palæozoics, masking the effects of the underlying rocks. Much of the land, then, consists of great stretches of old marine beds sloping down from one raised beach to the other. Through these thrust occasional masses of drumlins and periodic outcrops of rock. Moreover, the climate is arctic and therefore vegetation is limited to grass, moss and lichen, and soil development is inhibited. Thus these northern plains are of little economic value except for some hunting and trapping.

The plains may be divided into four sub-regions: the coast plain of Hudson Bay, between Churchill and Moosonee; the southern part of Southampton Island, and Coats and Mansel Islands; most of the islands and parts of the coast of Foxe Basin; and parts of the southern Arctic Archipelago, including northwest Baffin, Somerset, Prince of Wales, eastern Victoria and eastern Banks Islands.

The Canadian Appalachians.—These are a part of the great range of fold mountains extending from Newfoundland through the Maritimes and southeast Quebec to Tennessee and, beyond the Mississippi, to Arkansas. They were thrown up chiefly in Silurian, Devonian and Carboniferous times, thus involving Palæozoic strata. In those times, two long geosynclines ran through the region—the Laurentian and the Acadian. The former extended from northwest Newfoundland through the Gaspe Peninsula and southeast Quebec, and gave birth to the Long Range of Newfoundland and the Shickshock and Notre Dame Mountains of Quebec. The Acadian geosyncline reached from southeast Newfoundland through Nova Scotia and eastern New Brunswick and was responsible for the uplands of those regions.

Between the mountain ranges are wide basins, floored by sandstone, notably those of Prince Edward Island, Minas basin, and the Annapolis and St. John valleys. The whole complex mass of mountains was planed down by prolonged erosion, so that elevation is moderate, not more than 4,200 feet, and outlines are long and smooth with few sharp crests. The name of the highest area, Tabletop Mountain in the Shickshocks, is indicative of the subdued topography. Subsequently the region was glaciated and small glacial lakes, valley moraines and outwash fans play a significant role in scenery and occupation. Raised beaches to a height of 250 feet line many stretches of coast and are marked by roads and settlements. The rivers have been strongly rejuvenated and are lined with terraces, particularly valuable for cultivation. Intrusions of granite and trap are frequent. The trap sill forming North Mountain in Nova Scotia encloses the famous Annapolis Valley.

Many of the igneous intrusions are associated with metals, as at Bathurst in New Brunswick where large deposits of lead and zinc are found. At one time gold was mined about the intrusions in Nova Scotia. A large deposit of iron at Wabana and deposits of lead and zinc at Buchans, Newfoundland, are important. On the edge of the region, in the Eastern Townships of Quebec, is the world's largest supply of asbestos. Finally, significant deposits of coal occur in Cape Breton Island, Nova Scotia, and on the coasts of Northumberland Sound in New Brunswick. Thus, though the fertile plains of the sheltered basins included in the fold belts have long made the region predominantly agricultural, the mineral resources are the basis for limited but thriving industries. Lumbering on forest-clad hills and fishing from the bays of a much-indented coast further diversify the activities of the region.

The Western Cordilleras.—These consist of a belt of lofty ranges, deep troughs and broad plateaux, extending for 1,400 miles through the Yukon Territory and British Columbia, and having a width of up to 500 miles. The Cordilleras are characterized by intensive folding, elevation and faulting, the intrusion of enormous batholiths—igneous masses that warped-up overlying sedimentaries—and by volcanic activity. They are made up, therefore, of folded sedimentaries, igneous masses and metamorphic rocks. Although older rocks are exposed, Mesozoic and Cenozoic rocks predominate. In Precambrian times the geosynclines formed, in which the Yukon group of sediments in Yukon Territory and the Shuswap group in British Columbia were laid down. Later vast depressions occurred where sediments gathered that are now folded into the Purcells and southern Rockies. The accumulation of great depths of sediment, 20,000 feet or more thick, continued through Palæozoic into Mesozoic times. Then in Jurassic times violent volcanism, folding and the intrusion of granites occurred in the outer belts, throwing up the Coast and Selkirk Ranges. The Rocky Mountain system came into being during Cretaceous and Tertiary times.

The whole region was partly planed down and there is a frequent accordance of summit levels. However, subsequent uplift led to a renewed attack on the land by river and sea, and deeply entrenched rivers, fringed by pronounced terraces, are common. Glaciation has further deepened the valleys and eaten into the divides, leading to knife-like ridges and horn-shaped peaks. Eventual drowning of the coastal fringe made islands of outlying ridges and deep fjords of coastal troughs, producing a highly articulated shore line.

The Cordilleras may be divided into five structures: the Rocky Mountain system; the interior basins and plateaux; the Coast Range; the Inner Passage along the coast; and the outer insular arc.

The Rocky Mountain system begins, in Canada, with the Richardson Range, of moderate elevation, heavily glaciated and then dissected by rivers on its flanks, but with no marked peaks. Southwards is the Peel Plateau of flat sedimentary rocks, eaten into isolated tablelands by river action. Farther south occur the Mackenzie Mountains, with more intensively folded ridges and ice-serrated peaks rising to 9,000 feet. These are separated from the Rockies proper by a pronounced gap, that of the Liard River. The Rockies are composed partly of highly folded beds and partly of nearly flat beds that have been uplifted to great heights. They are split by faults and have been attacked by rivers so successfully as to give way to low passes such as Finlay Forks, Pine, Yellowhead, Kicking Horse and Crowsnest. Three clusters of peaks occur, dominated by Churchill Peak, 10,500 feet, in the north, Mount Robson, 12,972 feet, in the centre, and Mount Assiniboine, 11,870 feet, in the south.

The interior basins and plateaux are considerably lower than the Rocky or Coast Ranges. On the east they begin at a well-marked break called, in part of its course, the Rocky Mountain Trench. This carries the headwaters of the Liard, Peace, Fraser and Columbia Rivers. The Yukon Plateau, in the north, lies between Dawson and Selwyn Ranges. It has flat summits that are separated by deeply cut rivers. Southward, it passes to the Cassiar Mountains, strongly intruded with igneous masses. Thence the Stikine Plateau runs as far as the Skeena-Hazelton Ranges, which are again largely of intruded igneous rock. South of these is the Interior Upland of British Columbia, a wide area of flat-topped uplands from 3,000 to 4,000 feet high, with deep, many-terraced rivers flowing between. The gorge of the Fraser River is one of the most spectacular in Canada. The river basins afford considerable fertile land for cultivation and the plateau tops provide excellent pasture for cattle grazing. Toward the United States border are the Columbia Mountains, a complex system of folded and intruded rocks and fault-line depressions, rich in minerals and with productive river and lake terraces.

The Coast Range has the highest peaks in Canada including Mount Logan, 19,850 feet, in the Yukon Territory, and Mount Waddington, 13,260 feet, in British Columbia. The Canadian portion starts in the high, partly volcanic, partly folded mass of peaks known as the St. Elias Range. Here active glaciers have cut deep troughs and sharp ridges. South, the Coast Range has some large batholiths. The crystalline rocks have frequently become exposed by the very active erosion caused by heavy precipitation from oceanic airs. Consequently, most of the Coast Range, despite its massive structure, consists of a saw-like series of sharp peaks and ridges.

The Inner Passage, along the coast, comprises the Georgia, Queen Charlotte and Hecate Straits. It is a continuation northward of the string of great depressions occurring in the United States, such as the Sacramento and Willamette Valleys, but it became drowned by the sea and there is now little plain left. The mainland and island coasts rise very steeply to lofty mountains. The Passage has a very large number of arms, most of which are ice-cut fjords or fault depressions. These give it a highly indented shore, of utmost value for coastal fisheries and useful too in providing ready access to a wealth of lumber.

The outer insular arc is made up of outlying ridges, in line with the Coast Range of the United States, which, however, have become partially submerged under the sea. The result is a number of hilly or mountainous islands enclosing small fertile basins. The Queen Charlotte group in the north and Vancouver Island in the south are the most important.

The Western Cordilleras are very complex in structure and consequently have a wide range of resources. In some of the narrow plains, sedimentary rocks are underlain by coal fields as at Fernie and Nanaimo in British Columbia and at Carmacks in the Yukon Territory.. Oil is purported to lie under plateau sections in the Yukon. Gold made the Cariboo district of British Columbia and the Klondike area of Yukon Territory world-famous in their time but of greater importance are the large mineral masses usually associated with igneous intrusions, of which copper, lead and zinc are the most significant. To this wealth of metals, the Cordilleras add vast hydro-electric potential and dense, extensive forests. Agriculture is limited except on the Fraser delta and in one or two of the interior trenches.

The Arctic Ranges, or Innuitias.—These make up an extensive belt of fold mountains, 800 miles long, involving rocks from Silurian to Cretaceous times. Folding started in Appalachian times in Silurian and Devonian beds. It overlapped that of the Cordilleras in Cretaceous and Cenozoic beds. Two sub-regions exist—the Ellesmere Island system and the Parry Islands folded belt. The Ellesmere Island system seems to indicate a double orogeny, in Silurian and then again in Cretaceous times. The results have been fairly high ranges of from 6,000 to 10,000 feet where folding and thrust faulting are much in evidence. The trends of the folds are from southwest to northeast. The Parry Islands fold belt, trending more nearly west-east, consists of typical Appalachian-like folds in canoe-shaped structures about 2,000 feet high. They include large tracts of horizontal strata.

Farther north in the Sverdrup Islands and in those discovered by Stefansson, the strata form a coast plain* gently sloping towards the Arctic Ocean. The beds are much disturbed locally by piercement domes, notably in Axel Heiberg and Ellef Ringnes Islands. Geological discovery has not yet proceeded to the extent of determining the mineral wealth of the Innuitias. However, piercement domes are frequently the sites of the accumulation of pools of oil. The climate is so severe that it precludes any possibility of agricultural development and has even limited hunting and fishing activities.

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*See region 8, map, p. 3. Axel Heiberg Island, and those parts of Ellesmere Island shown on map as in region 8, are now (Nov. 1954) reclassified in region 7.

Subsection 2.—Hydrographic Features

Lakes and Rivers.—Canada's fresh-water lakes and rivers cover an area of 268,611 sq. miles. The outstanding lakes are, of course, the Great Lakes, though only part of these are in Canadian territory. The International Boundary between Canada and the United States passes through Lakes Superior, Huron, St. Clair, Erie and Ontario. Details are given in Table **2**.

2.—Elevations, Areas, and Depths of the Great Lakes

Lake	Elevation Above Sea-level	Length	Breadth	Maximum Depth	Total Area	Area on Canadian Side of Boundary
	ft.	miles	miles	ft.	sq. miles	sq. miles
Superior	602·23	383	160	1,302	31,820	11,200
Michigan (U.S.A.)	580·77	321	118	923	22,400	—
Huron	580·77	247	101	750	23,010	13,675
St. Clair	575·30	26	24	23	460	270
Erie	572·40	241	57	210	9,940	5,094
Ontario	245·88	193	53	774	7,540	3,727

There are no tides in the Great Lakes although considerable variation in water-levels is occasioned by strong winds.

Other large lakes of Canada, ranging in area from 9,000 to 12,000 sq. miles, are Lake Winnipeg, Great Slave Lake and Great Bear Lake. Apart from these, notable for size, there are innumerable lakes scattered over that major portion of Canada lying within the Canadian Shield. In an area of 6,094 sq. miles, accurately mapped, south and east of Lake Winnipeg, there are 3,000 lakes. In an area of 5,294 sq. miles, accurately mapped, southwest of Reindeer Lake in Saskatchewan, there are 7,500 lakes.

3.—Elevations and Areas of Principal Lakes, by Province

NOTE.—Areas given are for mean water levels. In the case of those reservoirs and lakes for which two elevations are given, HW means high water, LW low water, and N normal level.

Province and Lake	Elevation	Area	Province and Lake	Elevation	Area
	ft.	sq.miles		ft.	sq.miles
Newfoundland—			**Nova Scotia—**		
Deer	12	24	Bras d'Or	tidal	360
Gander	86	49			
Grand	270	140			
Melville	sea-level	1,133			
Michikamau	1,650	566	**New Brunswick—**		
Red Indian	500	65			
Victoria	700	15	Grand	tidal	65

3.—Elevations and Areas of Principal Lakes, by Province—continued

Province and Lake	Elevation	Area
	ft.	sq.miles
Quebec—		
Abitibi (total, 350) part	868	55
Albanel	1,289	145
Baskatong (reservoir)	HW 732 LW 677	109
Bienville	..	392
Burnt (Brûlé)	1,203	56
Cabonga (reservoir) (Kakabonga).	HW 1,185 LW 1,169	66
Champlain (total, 360) part	95	18
Chibougamau	1,253	138
Clearwater	790	410
d'Iberville	..	260
Evans	612	180
Goëland	660	125
Indian House	..	125
Kaniapiskau	1,850	210
Kempt	1,372	63
Kipawa	884	95
Lower Seal	860	130
Manicouagan	..	110
Manuan	1,340	100
Maricourt	..	110
Mattagami	615	88
Minto	..	485
Mistassini	1,243	840
Nichikun	1,760	150
Olga	635	50
Payne	..	230
Pipmakan	..	90
Pletipi	..	138
Quinze, des	HW 867 N 857	55
St. Francis, River St. Lawrence (total, 83) part.	LW 151 N 153	63
St. John	321	375
St. Louis	LW 65 N 67	57
St. Peter	LW 11	130
Simard	856	59
Timiskaming (total, 110) part	HW 593 N 584	55
Two Mountains	72	63
Waswanipi	680	75
Ontario—		
Abitibi (total, 350) part	868	295
Dog	1,378	61
Eagle	1,192	137
Erie (total, 9,940) part	572	5,094
Huron, including Georgian Bay (total, 23,010) part	581	13,675
Kesagami	..	90
La Croix (total, 55) part	1,181	25
Long	1,025	75
Manitou, Kenora	1,215	60
Mille Lacs, Lac des	1,491	102
Minnitaki	1,177	72
Nipigon	852	1,870
Nipissing	643	330
Ontario (total, 7,540) part	246	3,727
Rainy (total, 345) part (reservoir).	HW 1,108 LW 1,103	275
Red	1,157	69
St. Clair (total, 460) part	575	270
St. Francis, River St. Lawrence (total, 83) part.	LW 151 N 153	20
St. Joseph	1,219	187
Sandy	1,190	270
Ontario—concluded		
Seul (reservoir)	HW 1,172 LW 1,156	530
Simcoe	718	280
Stout, Berens River	1,039	50
Sturgeon, English River	1,342	110
Superior (total, 31,820) part	602	11,200
Timagami	962	90
Timiskaming (total, 110) part	HW 593 N 584	55
Trout, English River	1,294	156
Trout, Severn River	..	215
Woods, Lake of the (total, 1,485)[1] part (reservoir).	HW 1,062 LW 1,056	953
Manitoba—		
Athapapuskow	951	104
Atikameg	855	112
Beaverhill	651	70
Cedar	829	537
Cormorant	840	134
Cross Nelson River	679	274
Dauphin	853	200
Dog	815	64
Etawnei	..	28
Gods	585	319
Goose	935	53
Granville	850	181
Island	744	550
Kamuchawie (total, 56) part	1,153	30
Kipahigan (total, 59) part	963	29
Kiskitto	696	65
Kiskittogisu	709	99
Kississing	920	141
Manitoba	813	1,817
Molson	..	154
Moose	838	525
Namew (total, 79) part	873	8
Northern Indian	725	150
Nueltin (total, 336) part	..	76
Oxford	612	155
Paint	615	54
Pelican, west of Lake Winnipegosis	837	80
Playgreen	711	257
Red Deer, west of Lake Winnipegosis	862	86
Reed	911	78
Reindeer (total, 2,444) part	1,150	386
St. Martin	798	125
Setting	737	49
Sipiwesk	598	201
Sisipuk (total, 99) part	915	73
Southern Indian	835	1,060
Stevenson	..	75
Swan	849	100
Talbot	845	72
Todatara (total, 241) part	..	156
Walker	1,121	62
Waterhen	829	90
Wekusko	840	64
Winnipeg	713	9,094
Winnipegosis	831	2,086
Woods, Lake of the (total, 1,485)[1] part (reservoir).	HW 1,062 LW 1,056	69

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[1] Total includes 463 sq. miles in U.S.A.

3.—Elevations and Areas of Principal Lakes, by Province—concluded

Province and Lake	Elevation	Area
	ft.	sq. miles
Saskatchewan—		
Amisk	964	168
Athabasca (total, 3,058) part	699	2,165
Besnard	1,294	72
Black Birch	1,517	54
Candle	1,620	56
Canoe	1,415	78
Churchill	1,382	213
Cold (total, 136) part	1,756	36
Cree	1,541	350
Cumberland	871	93
Deschambault	1,072	209
Doré	1,506	248
Ile-à-la-Crosse	1,379	165
Kamuchawie (total, 56) part	1,153	26
Kipahigan (total, 59) part	963	30
La Plonge	1,476	90
La Ronge	1,250	450
Last Mountain	1,608	89
Loche, la	1,459	70
Montreal	1,608	162
Namew (total, 79) part	873	71
Nemeiben	1,259	63
Peter Pond	1,382	302
Primrose (total, 181) part	1,964	173
Quill	1,704	236
Reindeer (total, 2,444) part	1,150	2,058
Riou	..	75
Sisipuk (total, 99) part	915	26
Smoothstone	1,572	110
Snake	1,262	159
Tazin	1,130	156
Wollaston	1,300	768
Alberta—		
Athabasca (total, 3,058) part	699	893
Beaverhill	2,202	80
Biche, la	1,784	94
Buffalo	2,566	56
Calling	1,947	55
Claire	699	545
Cold (total, 136) part	1,756	100
Lesser Slave	1,893	461
Mamawi	699	64
Peerless	2,267	75
Primrose (total, 181) part	1,964	8
Sullivan (variable)	2,652	62
Utikuma	2,105	85
British Columbia—		
Adams	1,334	52
Atlin (total, 308) part	2,200	307
Babine	2,330	194
Chilko	3,842	75
Eutsuk	2,817	96
François	2,345	91
Harrison	34	87

Province or Territory and Lake	Elevation	Area
	ft.	sq. miles
British Columbia—concluded		
Kootenay	1,741	168
Kotcho (unsurveyed and estimated)	..	90
Lower Arrow	1,379	59
Okanagan	1,123	136
Ootsa	2,666	50
Quesnel	2,375	100
Shuswap	1,137	120
Stuart	2,225	139
Tagish (total, 138) part	2,148	93
Takla	2,270	102
Teslin (total, 161) part	2,250	65
Upper Arrow	1,395	88
Northwest Territories—		
Aberdeen	130	475
Artillery	1,190	207
Aylmer	1,230	340
Baker	30	975
Clinton-Colden	1,226	253
Dubawnt	500	1,600
Faber	753	163
Franklin	..	175
Garry	..	980
Gras, de	1,300	345
Great Bear	391	12,000
Great Slave	495	11,170
Hardisty	699	107
Hottah	..	377
Kaminuriak	320	360
Macdougal	..	265
Mackay	1,415	250
Maguse	..	540
Marian	495	90
Martre, la	..	685
Nueltin (total, 336) part	..	260
Nutarawit	..	350
Pelly	..	331
Point	..	295
Rae	748	74
Schultz	115	110
Thoalintoa	..	160
Todatara (total, 241) part	..	85
Yathkyed	300	860
Yukon Territory—		
Aishihik	..	107
Atlin (total, 308) part	2,200	1
Kluane	2,500	184
Kusawa	2,565	56
Laberge	2,100	87
Tagish (total, 138) part	2,148	45
Teslin (total, 161) part	2,250	96

The river systems of Canada, excluding those of the Arctic Archipelago, are best studied by segregating the main drainage basins as shown in Table 4.

4.—Drainage Basins

NOTE.—Classified by the Engineering and Water Resources Branch, Department of Northern Affairs and National Resources, Ottawa.

Drainage Basin	Area Drained[1]	Drainage Basin	Area Drained[1]
	sq. miles		sq. miles
Atlantic Basin		**Arctic Basin**	
Atlantic Provinces	213,885	Great Slave Lake	370,681
Great Lakes and St. Lawrence River	359,312	Arctic	559,676
Total	**573,197**	**Total**	**930,357**
		Pacific Basin	
Hudson Bay Basin		Pacific	273,540
		Yukon River	127,190
Northern Quebec	343,259		
Southwest Hudson Bay	283,997	**Total**	**400,730**
Nelson River	368,182		
Western Hudson Bay	383,722	**Gulf of Mexico Basin**	**10,121**
Total	**1,379,160**	**Area, Canada (less Arctic Archipelago)**	**3,310,396**

[1] Areas are approximate and are exclusive of those portions of the basins of all rivers that lie in United States territory.

In Eastern Canada, the Great Lakes and St. Lawrence drainage basin dominates all others and forms an unequalled system of navigable inland waterways through a region rich in natural and industrial resources. From Duluth at the head of Lake Superior to Belle Isle at the entrance to the Gulf of St. Lawrence, the distance is 2,280 miles. The St. Lawrence waterway and its tributaries, most of which have lakes available for reservoiring, have very large developed and potential power resources.

The greater part of Canada drains into Hudson Bay and the Arctic Ocean; the Nelson River drainage is exceptional in running *through* the most arable and the most settled part of Western Canada, but otherwise the rivers of the West, east of the Rockies, run *away* from the settled areas towards the cold northern salt waters and this adversely affects their industrial utility. The Mackenzie River, which drains Great Slave Lake, is, with its headwaters, the longest river in Canada (2,635 miles) and its valley constitutes the natural transportation route through the Northwest Territories down to the Arctic Ocean. From Fort Smith, on the Slave River, large river boats run without any obstruction down to Aklavik on the delta of the Mackenzie, a distance of 1,292 miles. Table **5** gives the lengths of the principal rivers with their tributaries classified according to the four major drainage basins.

5.—Lengths of Principal Rivers and Their Tributaries

NOTE.—In this table the tributaries and sub-tributaries are indicated by indentation of the names. Thus, the Ottawa and other rivers are shown as tributary to the St. Lawrence, and the Gatineau and other rivers as tributary to the Ottawa.

Drainage Basin and River	Length	Drainage Basin and River	Length
	miles		miles
Flowing into the Atlantic Ocean		**Flowing into the Atlantic Ocean**—con.	
St. Lawrence (to head of St. Louis, Minn.)	1,900	Ottawa—*concl.*	
Ottawa	696	Mississippi	105
Gatineau	240	Petawawa	95
du Lièvre	205	South Nation	90
Coulonge	135	Dumoine	80
Madawaska	130	North	70
Rouge	115	North Nation	60

5.—Lengths of Principal Rivers and Their Tributaries—concluded

Drainage Basin and River	Length
	miles
Flowing into the Atlantic Ocean—concl.	
St. Lawrence—*concl.*	
Saguenay (to head of Peribonca)	475
Peribonca	280
Mistassini	185
Ashuapmuchuan	165
St. Maurice	325
Mattawin	100
Manicouagan (to head of Racine-de-Bouleau)	310
Outardes	270
Bersimis	240
Richelieu	210
St. Francis	165
Chaudière	120
Via the Great Lakes—	
French (to head of Sturgeon)	180
Sturgeon	110
Grand	165
Thames	163
Spanish	153
Trent	150
Mississagi	140
Nipigon (to head of Ombabika)	130
Moira	60
Thessalon	40
St. John	418
Romaine	270
Natashquan	241
Moisie	210
Hamilton	208
Exploits	153
Naskaupi	152
Canairiktok	139
Eagle	138
Miramichi	135
Marguerite	130
Gander	102
Flowing into Hudson Bay	
Nelson (to head of Bow)	1,600
Saskatchewan (to head of Bow)	1,205
South Saskatchewan	865
Red Deer	385
Bow	315
Belly	180
North Saskatchewan	760
Red (to head of Sheyenne)	545
Assiniboine	590
Souris	450
Qu'Appelle	270
Winnipeg (to head of Firesteel)	475
English	330
Churchill	1,000
Beaver	305
Koksoak (to head of Kaniapiskau)	660
Kaniapiskau	575
Severn (to head of Black Birch)	610
Albany (to head of Cat)	610
Dubawnt	580
Eastmain	510
Fort George (to Nichicun Lake)	480
Attawapiskat	465
Kazan	455
Nottaway (to head of Waswanipi)	400
Waswanipi	190
Nelson (to head of Lake Winnipeg)	400
Rupert	380
Flowing into Hudson Bay—concluded	
Red (to head of Lake Traverse)	355
George (to Hubbard Lake)	345
Moose (to head of Mattagami)	340
Abitibi	340
Mattagami	275
Missinabi	265
Hayes	300
Winisk	295
Whale	270
Harricanaw	250
Great Whale	230
Leaf	165
Flowing into the Pacific Ocean	
Yukon (mouth to head of Nisutlin)	1,979
Yukon (Int. Boundary to head of Nisutlin)	714
Porcupine	590
Lewes	338
Pelly	330
Stewart	320
Macmillan	200
White	185
Columbia (total)	1,150
Columbia (in Canada)	459
Kootenay (total)	407
Kootenay (in Canada)	276
Fraser	850
Thompson (to head of North Thompson)	304
North Thompson	210
South Thompson (to head of Shuswap)	206
Nechako	287
Stuart (to head of Driftwood)	258
Chilcotin	146
West Road (Blackwater)	141
Skeena	360
Bulkley (to head of Maxam Creek)	160
Stikine	335
Alsek	260
Nass	236
Flowing into the Arctic Ocean	
Mackenzie (to head of Finlay)	2,635
Peace (to head of Finlay)	1,195
Finlay	250
Smoky	245
Little Smoky	185
Parsnip	145
Athabasca	765
Pembina	210
Liard	755
South Nahanni	350
Petitot	295
Fort Nelson	260
Hay	530
Peel (to head of Ogilvie)	425
Arctic Red	310
Slave	258
Twitya	200
Back	605
Coppermine	525
Anderson	430
Horton	275

Ocean Areas and Seas.—A comprehensive description of the ocean areas and seas of Canada would include sciences such as oceanography, marine biology and meteorology. However, the basic factor in any study of the oceanic-continental margin is the physical relief of the sea-floor and the scope of the information presented here is, therefore, restricted to this and a few salient features of the Atlantic, Arctic and Sub-Arctic, and Pacific marginal seas surrounding Canada. Further details are given in the 1947 Year Book, pp. 3-12.

Atlantic.—Along this coastal area, the sea has inundated valleys and lower parts of the Appalachian Mountains as well as those of the Canadian Shield. The submerged Continental Shelf, protruding seaward from the shore, effects the transition from continental to oceanic conditions. This Shelf is distinguished by great width and diversity of relief. From the coast of Nova Scotia its width varies from 60 to 100 miles, from Newfoundland 120 to 50 miles (at the entrance of Hudson Strait), and northward it merges with that of the Polar Sea. The outer edge of the Shelf, known as the Continental Shoulder, is of varying depths of from 100 to 200 fathoms before the Shelf suddenly gives way to the steep declivity leading to abyssal depths. The over-all gradient of the Atlantic Continental Shelf is slight but the whole area is studded with shoals, plateaux, banks, ridges and islands and the coasts of Nova Scotia and Newfoundland are rugged and fringed with islets and shoals. Off Nova Scotia, the 40-fathom line lies at an average of 12 miles from the shore and constitutes the danger line for coastwise shipping. The whole floor of the marginal sea appears to be traversed by channels and gullies cutting well into the Shelf.

The main topographical features of the Atlantic marginal sea-floor are attributed to glacial origin but land erosion is an important factor. Eroded materials are carried seaward by rivers, ice and wind, and wave action against cliffs and shore-banks washes away enormous masses that are deposited over the surrounding sea-floor. The conformation of the continental sea-floor is, therefore, constantly changing and navigation charts of Canada's eastern seaboard must be continuously revised.

Arctic and Sub-Arctic.—The submerged plateau protruding from the northern coast of North America is a major part of the Great Continental Shelf surrounding the North Polar Sea on which lie all the Arctic Islands of Canada, Iceland, Greenland and most of those of Europe and Asia. The Polar Shelf develops its maximum width on the 80th meridian of west longitude where it extends from the south of James Bay to the north coast of Ellesmere Island, a distance of over 2,000 miles.

The floor topography of this continental margin is somewhat hypothetical but sufficient has been charted to indicate an abrupt break at the northern oceanward edge. This steep continental terrace borders the whole western side of the Canadian Archipelago and constitutes one of the most striking and significant features of the Polar regions. From this declivity, deep well-developed troughs, cut by glaciers, enter between the western group of islands. A ridge across Davis Strait on which the depth is about 200 fathoms separates this basin from the open Atlantic.

Hudson Bay and Hudson Strait bite deeply into the continent. Hudson Bay is an inland sea 250,000 sq. miles in area having an average depth of about 70 fathoms; the greatest charted depth in the centre of the Bay is 141 fathoms.

Hudson Strait separates Baffin Island from the continental coast and connects Hudson Bay with the Atlantic Ocean. It is 430 miles long and from 37 to 120 miles wide and its greatest charted depth of 481 fathoms is close inside the Atlantic entrance. Great irregularities of the sea-floor are indicated but, except in inshore waters, few navigation hazards have been located.

Pacific.—The marginal sea of the Pacific differs strikingly from the other marine zones of Canada. The hydrography of British Columbia is characterized by bold, abrupt relief—repetition of the mountainous landscape. Numerous inlets penetrate the mountainous coast for distances of 50 to 75 miles. They are usually a mile or two in width and of considerable depth, with steep canyon-like sides. From the islet-strewn coast, the Continental Shelf extends from 50 to 100 sea-miles to its oceanward limit where depths of about 200 fathoms are found. There the sea-floor drops rapidly to the Pacific Deeps, parts of the western slopes of Vancouver Island and the Queen Charlotte Islands lying only four miles and one mile, respectively, from the edge of the declivity. These great detached land-masses are the dominant features of the Pacific marginal sea. Along the whole coast continuous navigation is afforded through an inside passage sheltered from the sea by a protective barrier of islands. As is to be expected in a region so irregular in hydrographic relief, shoals and pinnacle rocks are numerous, necessitating great caution in navigation.

Subsection 3.—Islands

The northern and western coasts of Canada are skirted by clusters of islands. Those on the north include a very large group within the Arctic Circle. On the west coast, Vancouver Island and the Queen Charlotte Islands are the largest and most important but the coastal waters are studded with many small rocky islands.

The Island of Newfoundland forming part of the Province of Newfoundland, the Province of Prince Edward Island, Cape Breton Island forming part of the Province of Nova Scotia, Grand Manan and Campobello Islands forming part of the Province of New Brunswick, Anticosti Island and the Magdalen group included in the Province of Quebec are the chief islands off the eastern coast.

Notable islands of the inland waters include Manitoulin Island (1,068 sq. miles in area) lying in Lake Huron, the so-called Thirty Thousand Islands of Georgian Bay and the Thousand Islands in the outlet from Lake Ontario into the St. Lawrence River.

6.—Islands of Over 2,000 Sq. Miles in Area

Island	Area	Island	Area
	sq. miles		sq. miles
Arctic Ocean—		**Arctic Ocean**—concluded	
Baffin	178,700	Bylot	4,200
Ellesmere	82,119	Prince Charles	3,500
Victoria	81,930	Cornwallis	2,670
Banks	23,230	Amund Ringnes	2,515
Devon	20,860		
Melville	16,141		
Axel Heiberg	15,779	**Atlantic Ocean—**	
Southampton	15,700	Newfoundland	42,734
Prince of Wales	12,830	Cape Breton	3,970
Somerset	9,370	Anticosti (Gulf of St. Lawrence)	3,043
Prince Patrick	6,081	Prince Edward	2,184
Bathurst	6,041		
Ellef Ringnes	5,139	**Pacific Ocean—**	
King William	4,870	Vancouver	12,408

Subsection 4.—Mountains

The predominant orographical feature in Canada is the Great Cordilleran Mountain System which contains many peaks over 10,000 feet in height. The highest peak in Canada is Mount Logan in the St. Elias Mountains of Yukon Territory, which rises 19,850 feet above sea level. The highest elevations in other parts of the country are shown in Table 7.

7.—Height of Principal Mountain Peaks in each Province and Territory, by Mountain Range

Province, Mountain Range and Peak	Elevation
	ft.
Newfoundland	
Long Range—	
Gros Morn	2,666
Mount Blowmedown	2,502
Mount St. Gregory	2,338
Gros Paté	2,115
Blue Mountains	2,085
Table Mountain	1,700
Blue Hills of Coteau—	
Peter Snout	1,690
Butter Pott	950
Red Hill	700
Central Highlands—	
Maintopsail	1,800
Missentopsail	1,761
Torngats—	
Cirque Mountain	6,500
Mount Eliot	4,550
Mount Tetragona	4,510
Mount Razorback	3,660
Mount Sir Donald	1,950
Cape Chidley	1,500
Kaumajets—	
Bishop's Mitre	3,500[1]
Nova Scotia	
Ingonish Mountain	1,392
Creignish Hills (at Creignish)	850
Cobequid Mountains (at E. Mapleton)	840
North Mountain (4 miles NE of Annapolis)	590
South Mountain (at Annapolis)	515
New Brunswick	
Mount Carleton	2,630
Green River Mountain	1,600
Moose Mountain	1,490
Quebec	
Appalachians—	
Mount Jacques Cartier (Shickshocks)	4,160
Mount Richardson	3,885
Barn Mountain	3,775
Mount Logan	3,700
Mount Magnetic	3,625
Mount Albert	3,550
Quebec—concluded	
Appalachians—concluded	
Mount Bayfield	3,470
Mount Mattawa	3,370
Roundtop Mountain (Sutton Mountains)	3,175
Mount Orford	2,860
Mount Hereford	2,760
Pinnacle Mountain	2,150
Mount Brome	1,725
Mount Shefford	1,725
Shield—	
Mount Tremblant (Laurentian Mountains)	3,150
Mount Ste. Anne (Laurentian Mountains)	2,625
Monteregian Hills—	
Mount St. Hilaire	1,350
Mount Yamaska	1,275
Rougemont	1,250
Mount Johnson	725
Mount Royal	700
Ontario	
Niagara Escarpment (at Caledonia)	1,550
Mount St. Patrick	1,383
Lion's Head Hill	1,034
Mount Nemo	1,000
Dundas Mountain	825
Clappison	735
Manitoba	
Duck Mountain	2,600
Porcupine Mountain	2,500
Riding Mountain	2,000
Saskatchewan	
Cypress Hills (Summit)	4,243
Wood Mountain (West Summit)	3,371
Wood Mountain (East Summit)	3,347
Vermillion Hills	2,255
Alberta	
Rockies—	
Columbia	12,294
The Twins[2]	12,085
Forbes	11,902
Alberta	11,874
Assiniboine	11,870
The Twins[2]	11,675

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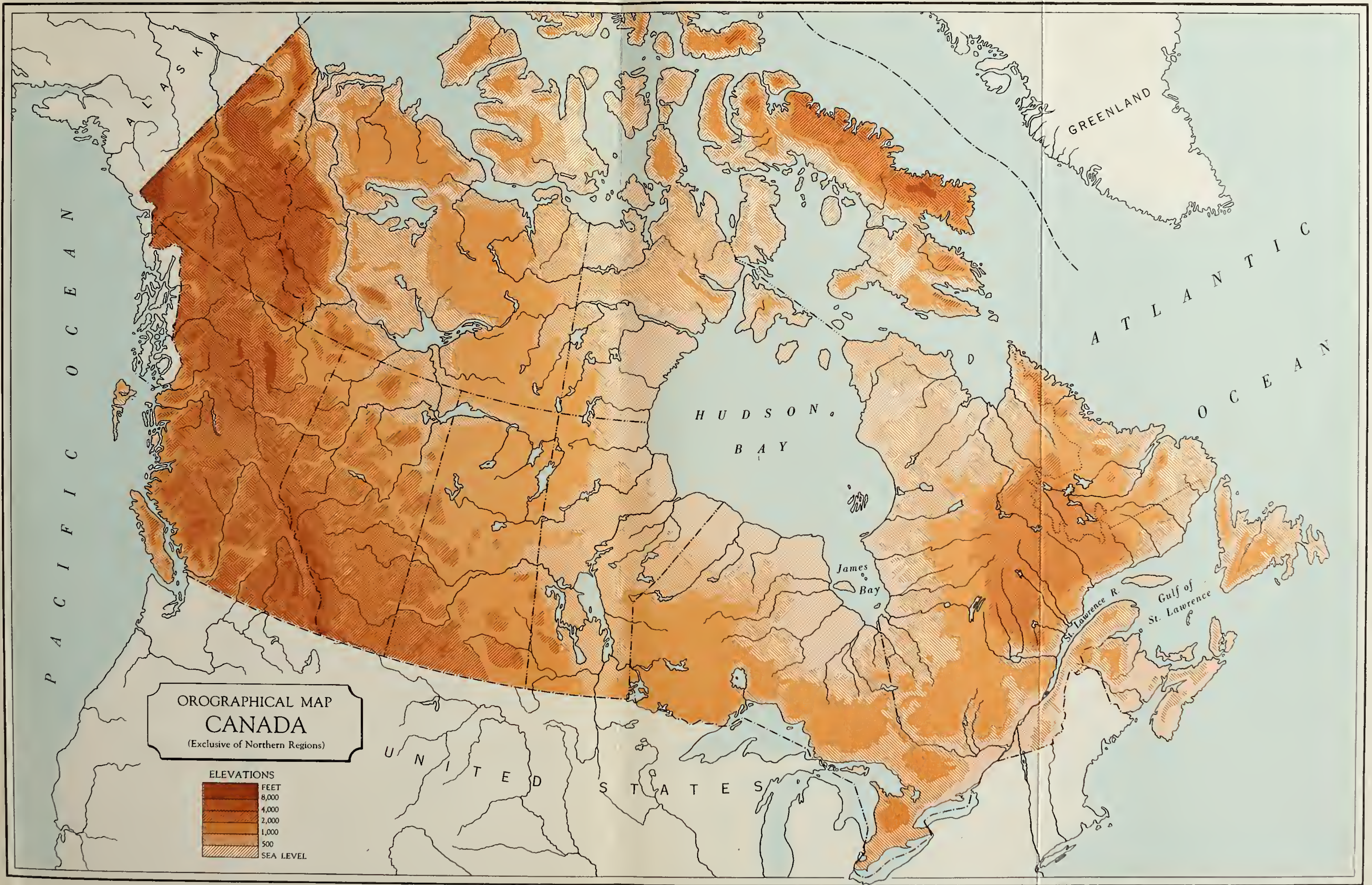
[1] Approximate. [2] One of two peaks.

7.—Height of Principal Mountain Peaks in each Province and Territory, by Mountain Range—concluded

Province, Mountain Range and Peak	Elevation
	ft.
Alberta—concluded	
Rockies—concluded	
Temple	11,636
Kitchener	11,500
Diadem	11,500
Lyell	11,495
Athabasca	11,452
Hungabee	11,447
King Edward	11,400
Stutfield	11,400
Brazeau	11,386
Victoria	11,355
Snow Dome	11,340
Joffre	11,316
Murchison	11,300
Deltaform	11,225
Lefroy	11,220
Alexandra	11,214
Sir Douglas	11,174
Woolley	11,170
Lunette	11,150
Hector	11,135
Clearwater	11,044
Edith Cavell	11,033
Fryatt	11,026
Coleman	11,000
Wilson	11,000
Eiffel Park	10,091
Pinnacle Mountain	10,061
Mount Rundle	9,665
Mount Eisenhower	9,030
Three Sisters	8,840
Mount Edith	8,370
British Columbia	
Coast Range—	
Waddington	13,260
Tiedemann	12,000
Tatlow	10,050
Skihist	9,660
Crown	4,708
Selkirks—	
Sir Sandforth	11,342
Dawson	11,123
Hasler	11,113
Delphine	11,076
Huber	11,041
Wheeler	11,023
Selwyn	11,013
Adamant	10,980
Grand	10,832
Mount Sir Donald (Sir Donald Range)	10,808
Nelson	10,772
Inoclast	10,646
Rogers Park (Hermit Range)	10,536
Rockies—	
Robson	12,972
Clemenceau	12,001
Goodsir	11,676
Bryce	11,507
Chown	11,500
Resplendent	11,240
King George	11,226
Consolation	11,200
The Helmet	11,160
Whitehorn	11,101
Geikie	11,016
Province or Territory, Mountain Range and Peak	**Elevation**
	ft.
British Columbia—concluded	
Rockies—concluded	
Bush	11,000
Sir Alexander	11,000
Freshfield	10,945
Mummery	10,918
Vaux (Vermillion Range)	10,881
Ball	10,865
Stephen	10,485
Cathedral	10,454
Storm	10,372
Gordon	10,346
President	10,287
Odaray	10,165
Laussedat	10,015
Mount Burgess	8,463
St. Elias Mountains—	
Fairweather	15,287
Root	12,860
Monashee—	
Mount Begbie	8,946
Vancouver Island Range—	
Mount Albert Edward	6,968
Mount Arrowsmith	5,976
Yukon Territory	
St. Elias Mountains—	
Logan	19,850
St. Elias	18,008
Lucania	17,150
King	17,130
Steele	16,439
Wood	15,880
Vancouver	15,700
Hubbard	14,950
Walsh	14,780
Alverstone	14,500
McArthur	14,400
Augusta	14,070
Strickland	13,818
Newton	13,811
Cook	13,760
Craig	13,250
Badham	12,625
Malaspina	12,150
Jeannette	11,700
Baird	11,375
Seattle	10,070
Northwest Territories	
Franklin Mountains—	
Delthore	6,800
Clark Mountain	3,000 to 4,000
Ellesmere Area—	
Mount Rawlinson	5,000
Victoria Island—	
Mount Pelly	675
Banks Island—	
Nelson Head	1,000


OROGRAPHICAL MAP
CANADA
(Exclusive of Northern Regions)
ELEVATIONS
FEET
8,000
4,000
2,000
1,000
500
SEA LEVEL
ALASKA
PACIFIC OCEAN
GREENLAND
ATLANTIC OCEAN
HUDSON BAY
James Bay
St. Lawrence R.
Gulf of St. Lawrence
UNITED STATES

COMPILED, DRAWN AND PRINTED AT THE SURVEYS AND MAPPING BRANCH OTTAWA 1953

ITH OVER 5,000 INHABITANTS

ation ove Level	Province	Station	Elevation Above Sea-Level
et			feet
	Ontario—*Concluded*	Pembroke (C.P.R.)	381
77		Perth	440
315		Peterborough (C.P.R.)	632
962		Port Arthur (C.P.R.)	614
207		Port Colborne (C.N.R.)	583
120		Port Hope (C.N.R.)	287
109		(C.P.R.)	299
118		Preston	926
121		Renfrew (C.P.R.)	418
308		Riverside	201
		St. Catharines (C.N.R.)	348
		St. Thomas (C.N.R.)	756
301		Sarnia (C.N.R.)	612
75		Sault Ste. Marie (C.P.R.)	636
		Simcoe (South)	714
		(North)	724
121		Smith's Falls (C.P.R.)	428
306		Stratford (C.N.R.)	1,193
		Sudbury (C.P.R.)	857
593		Swansea	[1]
		Thorold (C.N.R.)	565
49		Tillsonburg (C.N.R.)	759
028		(M.C.R.)	803
52		Timmins (O.N.R.)	1,029
010		Toronto (Union)	273
161		Trenton (C.P.R.)	295
		Wallaceburg	580
433		Waterloo (C.N.R.)	1,058
152		Welland (C.N.R.)	600
		Weston	429
726		Whitby (C.N.R.)	286
260		Windsor (M.C.R.)	606
263		Woodstock (C.P.R.)	948
359			
721	Manitoba	Brandon (C.P.R.)	1,206
706		(C.N.R.)	1,262
283		Dauphin	968
327		Flin Flon	1,098
594		Portage la Prairie (C.P.R.)	858
296		St. Boniface (C.P.R.)	759
589		Selkirk	744
183		Transcona (C.N.R.)	771
513		Winnipeg (C.P.R.)	772
187			
	Saskatchewan	Moose Jaw (C.P.R.)	1.778
592		North Battleford	1,688
605		Prince Albert (C.P.R. and C.N.R.)	1,414
122		Regina	1,896
617		Saskatoon (C.P.R.)	1,596
936		Swift Current (C.P.R.)	2,432
042		Weyburn (C.P.R.)	1,857
305		Yorkton (C.P.R.)	1,657
163			
880	Alberta	Calgary (C.P.R.)	3,439
890		Edmonton (C.P.R.)	2,183
090		(C.N.R.)	2,186
253		Jasper Place	[1]
101		Lethbridge (C.P.R.)	2,983
620		Medicine Hat (C.P.R.)	2,182
628		Red Deer (C.N.R.)	2,816
430		(C.P.R.)	2,819
832			
805	British Columbia	Chilliwack	32
315		Kamloops (C.P.R.)	1,160
593		Kelowna	1,131
307		Kimberley	3,661
771		Nanaimo (C.P.R.)	129
		Nelson (C.P.R.)	1,766
572		New Westminster (C.P.R.)	12
662		(C.N.R.)	34
328		North Vancouver	12
725		Penticton	1,127
330		Port Alberni	13
215		Prince Rupert (C.N.R.)	19
585		Trail (C.P.R.)	1,363
329		Vancouver (C.P.R.)	16
644		Vernon	1,254
686		Victoria (E. and N. R.)	29

Section 2.—Main Physical and Economic Features of the Provinces

Politically, Canada is divided into ten provinces and two territories. Each of the provinces is sovereign in its own sphere, as set out in the British North America Act, 1867, and its amendments. As new provinces have been organized they have been granted political status equivalent to that of the original provinces. The Yukon and Northwest Territories, with their present boundaries, are administered by the Federal Government. The chief physical and economic features of each of the provinces and of the territories are reviewed in the 1954 Canada Year Book, pp. 13-19. Details of resources and their development are given in the different chapters of this volume (*see* Index).

PART II.—LAND RESOURCES AND PUBLIC LANDS

Section 1.—Land Resources

Extensive areas of arable and forested land, together with vast water-power resources, are the basis of Canada's industrial and commercial life. Agricultural land has been developed on a substantial scale and is well distributed from east to west. It is characterized by a diversity of contour, soil and climate and is thus capable of producing a great variety of crops in a volume well beyond domestic requirements. Of the total land area, 15·5 p.c. is estimated as suitable for cultivation and of this area a little less than 50 p.c. is, at present, occupied. Most of the unoccupied land considered potentially suitable for agriculture is now under forest. Altogether, about 42 p.c. of the total land area of the country is forested. This vast extent is of immense importance, not only in the production of lumber, pulpwood and fuel, but also in tempering the climate and conserving the water supply.

This Section of the Year Book is concerned only with those summary phases of the subject that may be regarded as falling under the definition of physiography used in its wider interpretation. Detailed information relating to individual natural resources and their development will be found in later chapters, together with data concerning the efforts directed to conservation of those resources.

Table 1 classifies the land resources as agricultural, forested or unproductive. Duplication is unavoidable, to the extent of agricultural lands under forest, between the totals of present and potential agricultural land and the totals of forested land. Figures of total land area and forested area are obtained from the Geographical Branch of the Department of Mines and Technical Surveys; those of agricultural lands are based on the 1951 Census.

1.—Land Area, classified as Agricultural, Forested or Unproductive, by Province

NOTE.—The areas included in this table are estimates only, with the exception of the figures of occupied agricultural land, which information was obtained from the 1951 Census.

Description	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
Agricultural Land (Present and Potential)—												
Occupied—												
Improved—Crops and summerfallow	32	669	750	1,123	9,121	14,030	15,397	57,126	32,223	1,161	[1]	131,632
Pasture	9	309	242	381	4,196	5,055	914	2,252	1,739	536	—	15,633
Other	5	31	42	68	478	748	504	1,258	837	97	—	4,068
Unimproved—Forest (woodland)[2]	58	541	2,884	3,194	9,179	6,020	2,832	4,602	4,477	1,807	—	35,594
Other	29	161	1,041	656	3,255	6,772	8,057	31,111	30,192	3,747	[1]	85,021
Totals, Occupied	133	1,711	4,959	5,422	26,229	32,625	27,704	96,349	69,468	7,348	[1]	271,948
Unoccupied—												
Grass, brush, etc.	[3]	64	3,677	1,056	1,500	5,899	8,541	9,242	26,872	2,948	10,065	69,864
Forested[2]	[3]	80	3,000	9,500	36,893	61,990	16,000	23,000	45,000	11,450	4,000	210,913
Totals, Unoccupied	[3]	144	6,677	10,556	38,393	67,889	24,541	32,242	71,872	14,398	14,065	280,777
Non-forested	75	1,234	5,752	3,284	18,550	32,504	33,413	100,989	91,863	8,489	10,065	306,218
Forested[2]	58	621	5,884	12,694	46,072	68,010	18,832	27,602	49,477	13,257	4,000	246,507
Totals, Agricultural Land[4]	**133**	**1,855**	**11,636**	**15,978**	**64,622**	**100,514**	**52,245**	**128,591**	**141,340**	**21,746**	**14,065**	**552,725**
Forested Land—												
Softwood—Merchantable	7,161[5]	90	4,600	5,000	138,685	59,891	1,835	18,937	7,700	65,452	35,200	344,551[5]
Young growth	4,059[5]	215	3,180	3,000	39,310	19,647	9,115	5,858	24,070	58,598	10,000	177,052[5]
Mixed wood—Merchantable	—	150	825	7,000	30,195	45,182	1,100	6,909	9,360	—	19,800	120,521
Young growth	—	130	480	5,000	29,768	8,967	5,120	3,273	31,430	—	3,500	87,668
Hardwood—Merchantable	—	15	1,620	1,000	4,208	19,058	1,680	8,777	3,620	—	4,700	44,678
Young growth	—	10	850	1,000	8,606	7,067	11,650	4,129	16,880	—	2,500	52,692
Totals, Productive Forested Land	11,220[5]	610	11,555	22,000	250,772	159,812	30,500	47,883	93,060	124,050	75,700	827,162[5]
Unproductive Forested Land	13,699[5]	—	—	190	94,314	63,400	62,500	62,804	37,560	124,141	200,100	658,708[5]
Totals, Forested Land	**24,919[5]**	**610**	**11,555**	**22,190**	**345,086**	**223,212**	**93,000**	**110,687**	**130,620**	**248,191**	**275,800**	**1,485,870[5]**
Net Productive Land[6]	**24,994[5]**	**1,844**	**17,307**	**25,474**	**363,636**	**255,716**	**126,413**	**211,676**	**222,483**	**256,680**	**285,865**	**1,792,088[5]**
Waste and Other Land[7]	**123,000[8]**	**340**	**3,436**	**1,999**	**160,224**	**92,425**	**93,310**	**8,506**	**26,317**	**102,599**	**1,172,919**	**1,785,075[8]**
Totals, Land Area	**147,994**	**2,184**	**20,743**	**27,473**	**523,860**	**348,141**	**219,723**	**220,182**	**248,800**	**359,279**	**1,458,784**	**3,577,163**

[1] Less than one square mile. [2] Included also in *Forested Land;* duplication eliminated in the item *Net Productive Land.* [3] For purposes of this table, the unoccupied agricultural land of Newfoundland (figures for which are not available) is presumed to be nil. [4] Agricultural land of all classes and land that has agricultural possibilities in any sense. [5] Exclusive of Labrador. [6] Total agricultural land plus forested land minus forested agricultural land. [7] Includes open muskeg, rock, road allowances, urban land, etc. [8] Includes forested land in Labrador, area of which is not available.

Section 2.—Public Lands

In Table 2, classifying the area of Canada by tenure, items 2, 3 and 4 are obtained from Federal Government sources and items 1, 5 and 6 from Provincial Government sources.

2.—Area classified by Tenure, (circa) 1954

Note.—In previous editions of the Year Book this table was intended as a classification of "land" area only (excluding fresh water) and was therefore based on land area total. However, it has been concluded that the component items do include fresh-water areas, particularly rivers and the smaller lakes, so that the table is now based on "total" area.

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
1. Alienated from the Crown or in process of alienation	6,683	2,173	15,619	16,464	36,000	41,099	44,845	104,413	78,469	19,695	69	365,529
2. Federal lands other than National Parks and Indian reserves	2	—	13	476	90[1]	1,126	2	51	11,671	161	1,508,276[3]	1,521,868
3. National Parks	—	7	390	80	[2]	12	1,148	1,496	20,718[4]	1,671	3,625[5]	29,147
4. Indian reserves	—	4	30	59	281	2,436	819	1,882	2,370	1,283	9	9,173
5. Provincial lands, including leased lands and forest reserves but not Provincial Parks	148,631	—	5,016	10,906	538,245	362,830	197,094	142,173	141,940	329,358	—	1,876,193
6. Provincial Parks	48	—	—	—	20,244	5,079	2,604[6]	1,685	117	14,087	—	43,864
Totals, Land Area	**155,364**	**2,184**	**21,068**	**27,985**	**594,860**	**412,582**	**246,512**	**251,700**	**255,285**	**366,255**	**1,511,979**	**3,845,774**

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[1] Includes the Gatineau Park (70 sq. miles) and the Quebec Battlefields Park (0·36 sq. miles) which are under federal jurisdiction but are not technically National Parks. [2] Less than one square mile. [3] Includes 952,849 sq. miles set aside by Order in Council as native game preserves in which only Indians and Eskimos may hunt, as game sanctuaries in which hunting and trapping is otherwise forbidden, and as reserves for reindeer grazing, but which are not regarded as National Parks. [4] Includes Wood Buffalo Park (13,675 sq. miles) which, although reserved by the Federal Government, is not administered as a National Park. [6] That portion of Wood Buffalo Park in N.W.T. [6] Three areas, though not designated as Provincial Parks, are used for recreational purposes and are therefore included here (*see* p. 37)

Subsection 1.—Federal Public Lands

Public lands under the administration of the Federal Government comprise lands in the Northwest Territories, including the Arctic Archipelago and the islands in Hudson Strait, Hudson Bay and James Bay, lands in Yukon Territory, Ordnance and Admiralty Lands, National Parks and National Historic Sites, Forest Experiment Stations, Experimental Farms, Indian reserves and, in general, all public lands held by the several Departments of the Federal Government for various purposes connected with federal administration. The Dominion Lands Act (R.S.C. 1927, c. 113) and the Ordnance and Admiralty Lands Act (R.S.C. 1927, c. 58) were repealed in 1950, and the Territorial Lands Act (R.S.C. 1952, c. 263) and the Public Lands Grants Act (R.S.C. 1952, c. 224) were enacted to replace them and became effective June 1, 1950.

The largest areas under federal administration are the Northwest Territories and Yukon Territory amounting to 1,511,979 sq. miles or about 40 p.c. of the surface of Canada. This part of the national domain, which is all north of the 60th parallel of latitude, is under the administration of the Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources.

THE NORTHLAND—CANADA'S CHALLENGE*

On Dec. 16, 1953, the name of the Federal Department of Resources and Development was changed to Northern Affairs and National Resources. It was an important change, because it marked the first time that a department of government was designated, in its title, as being responsible for administering Canada's Northland. In all the years since Confederation, that responsibility had been submerged in the name of a Branch, or even a Division, of such Departments as Interior, Mines and Resources, and Resources and Development. It was a responsibility administered without fanfare.

Under these circumstances, the Canadian North was something of a blind spot in the eyes of Canadians living south of the 60th parallel of latitude. People did not much care, perhaps because they already had their local interests and a natural preoccupation with developing the southern two-thirds of their country. Where there was interest, it was often sporadic, roused by the romantic poems of Robert Service or novels about the red-coated Mounted Police, and excited by tales of gold-rush days, the discovery of oil at Norman Wells, or of radium at Great Bear Lake. Interest in the North flared up—and died—quickly, leaving only romantic impressions and little precise knowledge.

This change in name of the Department signified a new fact emerging, the fact that in recent years there has been a rapidly growing and much more permanent interest in the importance of that northern hinterland. But no new fact comes into being without the influence of prior events. What is interesting here is the series of events that wakened in Canadians the realization that they owned an important northern frontier.

Perhaps the most important factor in this awakening was simply that Canada, during World War II, had come of age. Until then, Canadians had been busy justifying the existence of the two great transcontinental railways. Time, energy and ingenuity were needed to settle and develop the vast areas opened up by that continent-wide system of transportation. In those years, Canada was like a youth who had not quite grown up. By the end of the second world war, much of the settlement and development of the southern fringe of the country, in which the majority of Canadians live, had been accomplished. Those with vision began to look farther afield—to the North. It was a time of peace and prosperity and Canada was strong enough to tackle new tasks.

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* Prepared under the direction of R. G. Robertson, Deputy Minister of the Department of Northern Affairs and National Resources, Ottawa.

This new preoccupation with the North, as it happened, coincided with the discovery that, on a long-term basis, new sources of raw materials were a prime necessity to the whole civilized world. This was particularly true of minerals. Old sources of supply were being depleted, and the rate of that depletion was accelerated by two major wars.

As eyes turned to the North, it became evident that the grounds for interest there extended beyond the realm of the economic. Living in that frozen land were 25,000 Canadians—native Indians and Eskimos, fur traders, missionaries, fishermen, miners, scientists and government officials. The majority of these people had a permanent stake in the North and were raising their families there. Their experiments in such fields as education, health and welfare and political organization could hardly help but have significance for the rest of the country. Furthermore, many of them were living what might be called a frontier way of life, with all its implied virtues of sturdiness, self-reliance, hospitality and social responsibility. Clearly, any investment in the enlargement of this frontier would pay ample dividends through the freshening influence of these virtues on the whole national life.

Another factor that directed the attention of Canadians to their Northland was its geopolitical position. Geopolitics, defined as the politics of a country as determined by its geographical position, is a term that has been used increasingly since recent advances in transportation and communication techniques have caused such a 'shrinkage' in the size of the world. Only a generation ago there were many places which, because of their isolation, had no political significance internationally. To-day, that is not so. Any place on land or sea can be reached from any other place in a matter of hours. Distance, if the incentive is great enough, is no longer a barrier. That is why the Yukon and Northwest Territories have assumed an added significance in world affairs. The shortest route by air between the leaders of the two major and opposing ideologies, the United States and the Union of Soviet Socialist Republics, is over the Canadian North. In view of this, it is not surprising that defence is a major aspect of the Canadian Government's interest in that area.

In the long-term view, however, it is in its economic importance that the Northland acts as a permanent magnet; in its role as a supplier of mineral wealth. It is the development of this wealth that constitutes the real challenge of the North to Canada.

Is it, then, a question of merely developing the Canadian North as other parts of the country have been developed in the past? Unhappily, it is not quite that simple. The whole key to the economic development of the Yukon and Northwest Territories is adequate transportation, without which much of the wealth is inaccessible. Admittedly transportation has been a problem in developing other parts of the country, but in those high latitudes there are two unusual factors that come into play and magnify the problem many times. These factors are climate and distance. They have made a nightmare of transportation problems in the Canadian North. They loom up behind every difficulty.

When the Canadian Pacific and Canadian National railways were built they traversed long stretches of unsettled land. But they were built with the firm hope that the vacant land would soon be covered with prosperous farms, each contributing to the revenue of the railways. But a railway or any other form of transportation in the Canadian North cannot count on such revenue. The unsettled land it traverses is unable to support an agricultural industry. The winters are too long and the soil is too poor. The railway, lacking revenue from intermediate points along its route, will be forced to levy high rates in order to stay in business. The necessarily high rates will be further aggravated by the distance factor. It is over 400 miles from railhead at Grimshaw, Alta., to the lead-zinc deposits at Pine Point on the south shore of Great Slave Lake, N.W.T. It is another 100 miles across the lake to Yellowknife. It is another 300 miles in a fairly direct line to Port Radium on Great Bear Lake. From Port Radium to Coppermine on the Arctic Coast is another 200 miles. North, south, east or west, the picture is much the same—scattered settlements and barren distance in between and everywhere the problem of distance from markets and distance from sources of supply. Pound for pound and mile for mile, the cost of carrying goods in the North will inevitably be higher than elsewhere in Canada.

Climate and distance then, will tend to force the development of the Northland into channels which, if at present unpredictable, will undoubtedly be unique in Canada. It may be unique also because of the role of the Federal Government. In other parts of the country, the enterprise of individuals and groups carried the main burden of development. In the Northland, if an hospitable economic climate is to be created in spite of adverse physical climate and barren distance, the role of the Government in the earlier stages of development at least, may have to be much more active than in the south.

The unshackling of northern wealth will, to some extent, follow lines of development already laid down, but the policies and practices of the past must be altered if future development is to be achieved on the scale that the times require.

Mineral Development.—Down to the present, development has consisted mainly of exploiting exceptionally rich or very large mineral deposits. This was unavoidable because of high production costs in the North; nevertheless, it meant that development was limited to a relatively small scale. For example, it is practicable to mine ore in northern Ontario with a gold content of about 0·15 oz. t. per ton and make a profit; in the Northwest Territories, to make the same profit, gold content of the ore must be about 0·45 oz. t. per ton. Evidently, the problem—and challenge—consists in getting costs down to a point where lower grade ore may be mined profitably on a large scale.

What has happened in post-war years in the North, when market prices were relatively high, indicates what might take place if costs could be lowered. In the first post-war year, 1946, the value of mineral wealth (excluding uranium) produced in the Yukon and Northwest Territories amounted to about $2,700,000. Gold production accounted for about $2,500,000 of this amount. Silver, lead, zinc and petroleum were produced in relatively small quantities. By 1953, the total value of mineral wealth produced (again, excluding uranium) increased to almost $25,000,000. The value of gold had risen to $12,500,000, about $10,000,000 of it from the Northwest Territories. In the Yukon Territory, the increase in base-metals mining was astonishing; in 1953, $3,800,000 worth of lead, $2,300,000 worth of zinc and $5,250,000 worth of silver were produced. These figures suggest an extraordinarily rapid growth period since 1946, which can be partly accounted for by the fact that, during the war years, the Canadian North was held dormant. At the end of the War, Northland activity spurted forward but, even granting the value of pent-up enthusiasm, it was higher prices that provided much of the impetus. Lower costs would help create the conditions necessary for similar but more permanent growth.

The increase in value of production from $2,700,000 in 1946 to $25,000,000 in 1953 was achieved from rich deposits that were known and at least partly developed before the War. In the Dawson Mining District of the Yukon where individual miners once stood knee-deep in the swirling streams and panned free gold from the gravels, great hydraulic dredges now operate: indeed, so prolific has this area been that one creek, Bonanza, has been worked over three times. The base-metals deposits of Mayo and Keno Hill were developed rapidly under the stimulus of high prices. The Yellowknife gold field was encouraged to bring its richer mines into production. The mining of radioactive ores at Great Bear Lake was stimulated when uranium, formerly a by-product in the output of radium, became vital as a source of atomic energy.

Though all this was highly satisfactory, it was quite clear that the true potential of the Canadian North could be realized only by opening up new fields, of which there are so many. That this was clear to those working in the North is shown by the fact that, since 1946, activity has been healthily divided among the three traditional stages of mining—prospecting, development and production. Inspired by the ground-breaking work of government geologists and topographers, hundreds of prospectors have penetrated the Northland, staking out the areas from which they hope the future wealth will pour.

Transportation Facilities.—Any great increase in the production of mineral wealth in the North will depend on the provision of expanded and cheaper transportation facilities. Transportation is necessary, first to discover ore bodies, then to bring in the equipment to develop them, and finally to take out the minerals. Present facilities consist of air, water and road transport; the only railway is the 110-mile White Pass and Yukon Railway, which connects the port of Skagway in the Alaska Panhandle to Whitehorse in Yukon Territory. A summary of existing services and their limitations will perhaps serve to point up the scope of the problems that must be overcome in giving the North a reasonably low-cost transportation system.

Of all the innovations that the twentieth century has brought to the Canadian North, the aeroplane has undoubtedly been the most revolutionary. It has performed perhaps its most important service in the exploration phase of mining, particularly in the Northwest Territories. From an uncertain mode of travel in the 1920's, when the skills of pilot and mechanic were often the only guarantees against disaster, it has developed into a means of transport of great reliability. Equipped with skis in winter and pontoons in summer, an aircraft has little trouble in finding a safe landing place in that lake and muskeg dotted country. It can deliver the geologist and prospector to a chosen spot, adding months to the short working season. The northern traveller no longer has to walk fifty miles to the west in order to get ten miles to the north. And those who wish to work in spring or early summer no longer need to sail north the previous year and spend a profitless winter of waiting.

In the second phase of mining—the development of the prospect—the aeroplane is playing an increasingly important role. As airstrips multiply, larger and larger commercial planes are penetrating the remote places of the North. To-day, one of the first jobs undertaken on a promising claim is the building of an airstrip so that equipment and supplies may be flown in.

Even in the final phase of mining—taking the product to market—the aeroplane is utilized. Although many commodities, such as base metals, can hardly be transported economically by air, there are some that can. Uranium concentrates and gold, for instance, are so valuable in relation to their weight that air freight is practicable.

Although air freight service has been greatly extended in recent years, the mass movement of bulk goods still depends on water transportation. Traditionally, since the time of the first explorers, the Mackenzie and Yukon Rivers have been used as highways into the Canadian North; both rank among the great river systems of the world. The series of rivers and lakes of the Mackenzie system has a total length of 2,635 miles from the headwaters of the Finlay River in the Rocky Mountains to the Mackenzie Delta on the Arctic Coast; the area drained is 700,000 sq. miles. The Yukon River, from the headwaters of the Nisutlin River in the Mackenzie Mountains, flows for 714 miles through Canada, draining an area of 170,000 sq. miles.

The first obvious drawback to these water highway systems is that they are closed to navigation for about eight months of the year. Modern industry, of course, requires a steady, two-way flow of commerce. It is difficult to compete in the open market if valuable inventories of goods and equipment are immobilized for months at a time. A second drawback is that the barges and river boats can deliver their cargoes only as far as localities along their banks. In the days when the fur trade was the only economic activity in the North this mattered little, since the trading posts were invariably built along the waterways. But it is likely that only a small proportion of the eventual mining centres will be located along the river systems, which means that supplementary transportation will be required on an ever-increasing scale.

In view of these facts, it is likely that water transportation will, in the future, be progressively dwarfed by air, and possibly by railways and roads. But bulk goods can be carried so cheaply by water that the rivers will continue to play their part in the transportation system.

It is only in recent years that roads have begun to probe into what has been described accurately as the trackless wilderness of the Canadian North. The philosophy behind road-building there has required an extremely practical basis: the road must contribute to the development of the mining industry. The exceptions to this rule are the Alaska Highway and the Canol Road, both of which were born of the strategic necessities of the second world war. The former, which traverses the southern part of the Yukon Territory, is still used heavily and is maintained by the Canadian Army. The latter, which runs from the oil fields at Norman Wells on the Mackenzie River in the Northwest Territories to a junction with the Alaska Highway about 75 miles east of Whitehorse, is no longer maintained for traffic.

The road system of the Yukon has been built partly by the Federal Government, partly by the Territorial Government, and partly by the various mining companies. From the major centres of the mining industry at Dawson and Mayo, and from Whitehorse, all-weather roads radiate to adjacent mining properties, and the three centres are themselves connected by road.

In the Northwest Territories, the only major road built to date is the 356-mile Mackenzie Highway which runs from railhead at Grimshaw in Alberta to Hay River on the south shore of Great Slave Lake. From Hay River, in winter, a road is maintained when necessary across the ice of Great Slave Lake to Yellowknife. Only 81 miles of the Mackenzie Highway are in the Northwest Territories. The Federal Government paid the full cost of building this stretch, and contributed two-thirds of the cost of the Alberta section. Connecting with the Mackenzie Highway, a 70-mile pioneer road has been built into the base-metals development at Pine Point. The Federal Government paid one-half the cost of this resource road.

Although the highway system in the Canadian North is not yet extensive, much has been learned about road-building under northern conditions that will be valuable when applied to additional construction. Some of the problems that had to be faced and that will be met with again were new in the history of engineering. Never before, for example, had Canadian highway engineers to contend with the problem of laying a road over permafrost, the permanently frozen subsoil of the North. Problems of labour, supply, equipment and climate also assumed novel forms. Thus these roads were an expensive necessity and only by substantial contribution on the part of the Federal Government was it possible to do what has been done. These contributions may be regarded as capital investments. Eventually, when enough of the mineral wealth has been made accessible, the returns will come in at a rate that will make the North far more than self-sufficient. Until that time, the assistance of the Federal Government is both justified and essential.

Hydro-Power.—There is another field, intimately related to the development of the mining industry, in which the Federal Government has provided extensive assistance—hydro-electric power. The construction of hydro-electric power projects is undertaken when a request is made by the mining interests, and usually where there is likelihood of more than one company making use of the output. Through its agency, the Northwest Territories Power Commission, the Government has built two hydro-electric plants. The first, completed in 1948, is on the Snare River about 90 miles from Yellowknife and has a capacity of 8,350 h.p. to service mines and other consumers in the area. The second, which began operating in November 1952, is on the Mayo River in Yukon Territory; it is at present delivering 3,000 h.p. to the lead-zinc-silver mines and communities in the Mayo area. The site of this plant has a capacity of 6,000 h.p. and, although present requirements are being met with the 3,000-h.p. output, future growth of the area has been provided for by the erection of installations capable of realizing the whole potential by simply adding more turbines and generators.

The Secondary Challenge—Furs and Fisheries.—It should not be inferred from the foregoing that the development of the mining industry constitutes the whole economic challenge of Canada's Northland. Though the mining industry will always be the backbone of the Northland's economy, the development of supplementary activities will play an important part. The fur trade and inland fisheries will contribute their share of wealth. To these may be added lumbering, agriculture, reindeer herding and the production of handicrafts. Economists have warned repeatedly of the dire consequences that result from depending on a 'one-crop' economy. Let demand for its product fall off, and the one-industry country or area loses its stability in a very short time. Diversification wherever and whenever possible is always held out as the most desirable state of affairs.

Much of the Canadian Northland's past—and a substantial part of its present—may be defined in terms of furs. For two centuries the fur trade was the sole basis of the northern economy. Although its value relative to mining has now declined, its absolute value has remained remarkably constant. With an average annual production value of approximately $2,000,000, it has been the major source of livelihood for almost the entire native population, and in all likelihood will continue to be so into the foreseeable future.

But changing conditions affected even this long-established industry. As the population of the Northland increased with growing industrialization, the number of forest fires grew to serious proportions. By destroying the forest cover necessary to the fur bearers and to wildlife generally, the fires became a menace to those who depended on trapping for a living. In addition, the number of trappers increased to the point where over-trapping was inevitable in many areas. These factors, plus the general improvidence of those who could see no end to nature's bounty, led the Government to adopt a policy of regulating trapping intended to ensure the economical harvesting of the fur crop on a sustained-yield basis. Native game preserves were established and restrictions were placed on the number of white trappers. Control measures, such as open and close seasons, were instituted for most mammals and maximum bag limits for certain fur bearers. The first three native game preserves were established in 1923 and, since then, three more have been added; the total area under protection amounts to almost 1,000,000 sq. miles. In addition, the Government has established smaller preserves in which even natives are prohibited from trapping and hunting. A Government forest and game protective service has been established and Government scientists are engaged in a continuing study of wildlife management problems.

Efforts to broaden the economic base of the Northwest Territories through encouragement of industries subsidiary to mining led, in 1945, to the establishment of an inland fishing industry at Great Slave Lake. Fifth largest on the continent, Great Slave Lake has an area of 11,170 sq. miles. It lies only 340 miles south of the Arctic Circle. Since the Northwest Territories is wholly under the jurisdiction of the Federal Government, the opportunity existed to institute a program of fishery management founded on scientific research and conservation measures. This opportunity was not lost.

The Fisheries Research Board of Canada made its first survey in 1944 and the following summer the lake was thrown open to commercial fishermen. Catch limits and fishing regulations were based on sound biological information accumulated by the Board. The original annual quota of 2,000,000 lb. of whitefish and trout has gradually been raised as a result of continuing surveys to a present level of 9,000,000 lb., an amount that covers both the summer and winter seasons. In 1953, the catch amounted to 5,700,000 lb., with a market value of $1,700,000.

In the first season of fishing there were 42 fishermen on the lake but so profitable did this enterprise prove that, by 1953, 305 licences were issued. The opening of the Mackenzie Highway in 1948 was a vital factor in the success of the fishery, since it provided swift and economical transportation from Hay River to railhead at Grimshaw, Alta. About 90 p.c. of the catch is marketed in the United States.

The Government maintains an inspection system at the packing houses at Gros Cap and Hay River; two patrol vessels travel the lake during the summer season and, for winter work, snowmobiles are used. The industry itself uses snowmobiles extensively in winter and altogether there are 40 of them in use at Great Slave Lake. The extensiveness of the industry, and its permanence, is indicated by the fact that one of the companies has built a 56-foot refrigerated diesel freighter capable of carrying 18 tons of fish.

The administration of the Great Slave Lake fisheries is the responsibility of the Federal Department of Fisheries. Field administration is centred in the office of the Chief Supervisor of Fisheries for the Central Area, located at Winnipeg, Man.

Lumber and Agriculture.—The existence of a thriving lumber industry at such a high latitude seems somewhat unique. The northernmost limit of tree growth extends from the mouth of the Mackenzie River on the Arctic Coast south-east to a point near Churchill, Man. Though the eastern portion of the Northwest Territories is almost completely lacking in forests, in the Mackenzie District and in the whole of Yukon Territory there are many areas of forested land important from an economic viewpoint. Because of the slow rate of growth, it is unlikely that lumbering will ever be an export industry but to whatever extent native timber can eliminate expensive imports and provide a living for the people it should be reckoned as an economic gain.

In the Yukon, local lumber supplied all the needs of the gold rush of 1898 and for 30 years after. Sawmills operating at Dawson and points along the Yukon River turned out vast quantities of lumber for buildings, flumes, sluice boxes, boats, and for thawing the frozen gravel so that the work of extracting gold might go on the year round. After 30 years, timber resources in this area were almost exhausted. To-day, however, small sawmills operate at Mayo, Dawson and various points along the Alaska Highway to manufacture building lumber and to provide fuel for steamboats on the Yukon River. In the Northwest Territories, small sawmills operate at various spots along the Slave River, at Great Bear Lake and along the Mackenzie River.

To protect the forests for the future, the Federal Government has established protection services. Headquarters for the Yukon Forest Protective Service is at Whitehorse; the Mackenzie River valley is the main centre of forest protection in the Northwest Territories, with warden stations located at Fort Smith, Yellowknife, Hay River, Fort Liard, Fort Resolution, Fort Simpson, Fort Norman, Fort Good Hope, Fort McPherson and Aklavik. Fire wardens, employed during the fire-hazard season, emphasize fire prevention publicity in addition to their other duties.

Although the climate and soil conditions of the Northwest Territories preclude the large-scale development of agriculture as an industry, small-scale farming operations have been carried on in the more favourable localities for more than 100 years. The missionaries and fur traders were the pioneers in this field and all down the Mackenzie River valley the rewards for this effort were, if not high, at least soul-satisfying. The long hours of sunshine make up for the short season of warmth.

The Government has carried out a series of extensive tests on the agricultural prospects of the Canadian North. Soil and horticultural surveys made in 1944 and 1945 led to the establishment of an experimental substation at Fort Simpson and a smaller one at Yellowknife. The soil surveys uncovered the fact that thousands of acres of potential fertility exist in the Liard, Slave, and upper Mackenzie River valleys. Even at Yellowknife, where the soil is sandy, it is possible to grow crops by using commercial fertilizer extensively.

In the Yukon, at the height of the Klondike gold rush, thousands of acres were under cultivation to supply the needs of the miners and others who swarmed into the gold fields. As the rush dwindled, agriculture also declined; to-day, however, there are few families that are not almost self-sustaining on a horticultural basis.

Experimental agricultural work by the Federal Government in the Yukon has gone on intermittently since 1915. An experimental substation operated near Dawson between 1917 and 1925 produced much factual information about land-use possibilities in that area. In 1942, a soil survey was made of lands adjoining the Alaska Highway and of those in the Yukon River basin. The following year an experimental substation was set up at Pine Creek on the Alaska Highway, about 100 miles west of Whitehorse. The location of this station permits extensive experimental work in the fertile Takhini-Dezadeash valley, which contains at least 100,000 acres of arable land. It is estimated that the Yukon has 250,000 acres of potential agricultural land.

Unique Activities.—The economic activities of the Canadian North, both major and secondary, that have been outlined thus far have all had some precedent in the more southerly parts of the country; previous experience and knowledge have been invaluable in extending their development into the North. There are, in addition, two wealth-producing activities that have no counterpart elsewhere in Canada—reindeer herding and Eskimo arts and crafts. Both stem from the need to give the natives some sort of stable outlet in order to balance the up-and-down prosperity of trapping. Both exemplify the trial-and-error method that must be followed when an area like the Canadian North is undergoing the process of adjustment to civilizing influences. For both, the trial proved to be very nearly without error.

In 1922 a Royal Commission recommended that Canada should try herding reindeer in the Northland. The practical beginning of the experiment was in 1935, when a herd of 2,370 Alaskan reindeer was brought to the Mackenzie Delta region. The reindeer thrived on a 24,500 sq. mile reserve and, over the years, have more than tripled in number. As the Eskimo apprentice herders learned the occupation, small herds were branched off from the main one and put in charge of the Eskimos themselves. There are now three such herds.

Eskimo arts and crafts are an outgrowth of the native's ingenuity in fashioning implements for himself from the meagre raw materials at hand. Soapstone and ivory were carved into useful articles such as lamps, harpoon heads and pots, into artistic models of animals and people and model kayaks. The art form existed; the role of civilization was to find permanent markets for it. Government encouragement first took the form of an annual grant to the Canadian Handicrafts Guild and later two field workers for the Guild joined the Department of Northern Affairs and National Resources. The future of arts and crafts as a steady source of income for the Eskimos seems assured; everywhere this art form is receiving enthusiastic appreciation.

The Government is constantly on the lookout for new activities that will help the natives bridge the gap between their traditional life and the civilization that is slowly developing around them. Recently, northern service officers have been appointed by the Department of Northern Affairs and National Resources; living among the natives, they will be able to meet at least one aspect of the challenge of the Northland on its home grounds. Their appointment is typical of the new ideas, new approaches, and new spirit being marshalled to master the whole range of the socio-economic problems of the North.

Political Forms.—Wherever mankind has found it economically profitable to labour, he has settled permanently; and wherever he has settled permanently he has needed political forms to organize and direct his activities. In this basic need the Canadian North is no different from other regions. Where it is different is in the problems posed by its great area and small, scattered population. The "rep by pop" cry of Canada's revolutionary days could solve no problems in the North. The same spirit of new ideas and new approaches that has been essential in meeting the economic challenge has been no less essential in meeting the political challenge.

During most of Canada's history, the Northland was a vast, unorganized territory with only a nominal form of government. Its permanent settlements were scattered trading posts and missions, and its way of life required little regulation. The real beginning of political evolution had to await the discovery and development of mineral wealth, and consequent increase in population.

This occurred in 1896 when the Klondike gold strike was made and thousands of people swarmed into the area. Two years later, an Act of Parliament made the Yukon a separate Territory and gave it a local government composed of a Commissioner and Legislative Council of six members, all appointed by the Federal Government. In 1899, the Act was amended to provide for the election of two additional members to the Legislative Council and, in 1902, a further amendment increased the size of the Council to 11 members, five of whom were elected. At the same time, the right to elect a member to the House of Commons was granted. In 1908, by further amendment, the Legislative Council became wholly elective, with ten members serving for a three-year term. Dawson was chosen as the capital.

As the amount of gold produced dwindled and population consequently decreased, the size of the Council was reduced, but it retained its fully elective character. In 1919, the Council was reduced to three members and it remained at this number until 1951. After the second world war, the Yukon again entered a period of rapid expansion, paced by the growing base-metals mining industry. Between 1941 and 1951 its population increased from 5,000 to 9,000. As a consequence, in 1951, the size of the Council was increased to five members, at which number it remains at the present time. In 1953, the seat of government was moved to Whitehorse.

In the Northwest Territories, mineral discoveries, on which economic and thus political development are based, came at a much later date than in the Yukon. After the first world war, the discovery of oil at Norman Wells caused a brief flurry of interest; in 1930, pitchblende ore, a source of radium and uranium, was discovered at Great Bear Lake; and in 1933 the Yellowknife gold field was discovered. Until these mineral finds were made, the Northwest Territories was a thinly populated area that had already passed through various elementary stages of government as the western provinces were gradually carved out of the great Canadian Northwest. It assumed approximately its present boundaries in 1905, at which time the previous territorial government was discontinued and provision was made for a Commissioner and Council of four members or fewer to administer the government. The seat of government was fixed at Ottawa. The powers of the Council remained dormant for some time, because the economy of the region was still based on the fur trade, which is capable of sustaining only a scanty human population.

The Norman Wells discovery necessitated provision for a more active administration, and the size of the Council was increased in 1921 to six and one member was designated as Deputy Commissioner. The Council was still wholly appointive. No further change was made until 1947, when a resident of Yellowknife was appointed to the Council.

As mineral development expanded, the population of the Northwest Territories increased rapidly; between 1931 and 1951, the white population rose from less than 1,000 to 5,340. To meet the changing needs and desires of the people, the system of government underwent significant changes. The Federal electoral district of Yukon which had been sending a member to the House of Commons for 45 years, was enlarged in 1947 to include part of the Mackenzie District and was re-named "Yukon-Mackenzie River". In 1952, the Redistribution Act provided for a separate member to represent Mackenzie District.

Important developments also occurred at the Territorial (analogous to provincial) and local government levels. In 1951, the Northwest Territories Act was amended to provide for elected representation on the Territorial Council. Under the amended Act, the number of Councillors was raised to eight, three of whom were elected for terms of three years. Effective in July 1954, the Council consists of nine members, five of whom are senior federal officials appointed by the Governor in Council and four of whom are residents of the Northwest Territories elected for three years to represent four electoral districts in the Mackenzie District. The Council must hold at least two meetings a year, one of which must be in the Territories. All other meetings must be held at the seat of government at Ottawa.

At the local level, important developments have also taken place. Because it was clear that the Territories would not readily fit into the usual classification of rural and urban municipality, a flexible concept known as a municipal district was evolved. Yellowknife, in 1939, was the first district created and the second was Hay River, in 1949. It is the usual practice when a district is first created to provide that a majority of the Council members be appointed by the Commissioner and a minority elected by the residents. This is still the situation at Hay River, but Yellowknife, in 1947, achieved the position where the elected members were in a majority of five to four, with the Chairman still being appointed. In 1949, the membership was reduced to eight, five elected and three appointed, with the Council electing its Chairman from its members. In 1954, the Council became fully elective and now consists of a Mayor and eight Councillors.

In summing up the economic and political background against which the development of the Canadian North will continue to unfold, it should be emphasized that only the barest start has been made in meeting the challenge of that development. Only the first, faint imprints of civilization are beginning to appear in a land that was left almost unmarked by its generations of shifting, nomadic people. As has been suggested, it is a development that will follow unprecedented courses because the frontier is being tamed by an adult country with all the force of twentieth century techniques behind it; because it is the aeroplane and not the covered wagon that penetrates the unmapped places.

Subsection 2.—Provincial Public Lands

Public lands of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia (except the Railway Belt and Peace River Block) have been administered since Confederation by the Provincial Governments. In 1930, the Federal Government transferred the unalienated portions of the natural resources of Manitoba, Saskatchewan, Alberta and of sections of British Columbia to their respective governments, and all unalienated lands in the Province of Newfoundland, except those administered by the Federal Government, became provincial public lands under the Terms of Union on Mar. 31, 1949.

All land in the Province of Prince Edward Island has been alienated except 11 sq. miles under federal administration.

Information regarding provincial public lands may be obtained from the respective provinces. (*See* the Directory of Sources of Official Information, Chapter XXIX, under "Lands".)

Certain areas in most of the provinces have been set aside for parks and reserves; these are dealt with in Subsection 3.

Subsection 3.—National and Provincial Parks

The future of Canada in the field of outdoor recreation is being wisely provided for by the establishment of National and Provincial Parks. Many of these Parks are easily accessible by highway, rail or air and offer every type of accommodation from camping facilities to palatial hotels and cosy cabins. A wide variety of summer and winter recreational attractions are available in mountain, lakeland, woodland and seaside areas of exceptional scenic beauty.

The areas of the Parks are given in Table 3; location, year of establishment, area, and main characteristics of each National Park are given in Table 4 followed by a brief description of the Provincial Parks.

3.—Area of National and Provincial Parks, by Province, 1954

Province or Territory	National	Provincial	Total
	sq. miles	sq. miles	sq. miles
Newfoundland	—	48·00	48·00
Prince Edward Island	7·00	—	7·00
Nova Scotia	390·61	—	390·61
New Brunswick	79·63	—	79·63
Quebec	[1]	20,244·00	20,244·00
Ontario	11·72	5,079·17	5,090·89
Manitoba	1,148·09	2,604·00[2]	3,752·09
Saskatchewan	1,496·05	1,685·13	3,181·18
Alberta	20,718·00	116·54	20,834·54
British Columbia	1,671·00	14,087·00	15,758·00
Yukon and Northwest Territories	3,625·00	—	3,625·00
Canada	**29,147·10**	**43,863·84**	**73,010·94**

[1] Less than one square mile. [2] Three areas, though not designated as Provincial Parks, are used for recreational purposes and are therefore included here (*see* p. 37).

National Parks.—From 1885, when the first National Park was established around the mineral hot springs at Banff, Alta., until 1954, 28 areas covering more than 29,000 sq. miles have been set aside as National Parks.

These Parks are maintained by the Federal Government for the protection of their flora, fauna and natural phenomena, for the preservation of their scenic beauty and interest and, in some cases, the marking of their historical significance in the building of the nation. They are supervised by the National Parks Branch, Department of Northern Affairs and National Resources, and are developed and maintained in such a manner as to provide perpetual inspiration, education and healthful recreation for present and future generations.

The National Parks are Canada's greatest single tourist attraction. Accommodation in privately owned hotels, bungalow cabins, chalets, lodges and cottages is available, and modern cabins have been built in several of the Parks by the National Parks Administration to afford low-rental accommodation to Park visitors. Recreational facilities include heated outdoor swimming pools with dressing-room buildings; equipped camp-grounds, some with trailer-park facilities; golf courses in superb scenic settings; tennis courts; bowling greens; well-equipped children's playgrounds; athletic fields; horseshoe pitches; outdoor checker-boards; and, in some of the Parks, amphitheatres where plays, concerts and film shows are held in the open. For winter sports there are down-hill and slalom ski courses, ski jumps, ski tows and a chairlift.

A Park warden service protects the forests and wildlife and maintains constant vigilance for the safety and comfort of visitors. Stocking and transfer of game fish are carried out extensively and successfully in order to improve angling opportunities in Park waters; fish hatcheries are operated in three of the mountain National Parks. (A special article on 'Game Fish in Canada's National Parks' is given in the 1952-53 Year Book, pp. 34-36.) Two of the National Parks are largely big-game preserves where herds of buffalo and other animals find sanctuary.

In addition to the scenic, recreational and wild animal parks, Canada has eleven national historic parks. The National Parks and Historic Sites Service of the Department of Northern Affairs and National Resources is also responsible for the marking, preservation and restoration of places of great historic interest in Canada. More than 450 such sites have been marked on the recommendation of the Historic Sites and Monuments Board of Canada.

4.—Location, Year Established, Area and Characteristics of National Parks

Park	Location	Year Established	Area	Characteristics
			sq. miles	
Scenic and Recreational Parks				
Banff	Western Alberta, on east slope of Rockies.	1885	2,564·0	Magnificent scenic recreational area; noted resorts, Banff and Lake Louise. Mineral hot springs; summer and winter sports. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Yoho	Eastern British Columbia, on west slope of Rockies.	1886	507·0	Lofty peaks, magnificent waterfalls, colourful lakes. Yoho and Kicking Horse Valleys. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Glacier	Southeastern British Columbia, on summit of the Selkirk Range.	1886	521·0	Superb alpine region, towering peaks, glaciers and forests. Accessible by rail only. Climbing, skiing, camping.
Waterton Lakes	Southern Alberta, adjoining Glacier Park in Montana, U.S.A.	1895	204·0	Canadian section, Waterton-Glacier International Peace Park. Mountain playground with spectacular peaks and beautiful lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.

4.—Location, Year Established, Area and Characteristics of National Parks—continued

Park	Location	Year Established	Area	Characteristics
			sq. miles	
Scenic and Recreational Parks—concl.				
Jasper	Western Alberta, on east slope of Rockies.	1907	4,200·0	Mountain playground and noted wildlife sanctuary. Majestic peaks, ice-fields, beautiful lakes and famous resort, Jasper. Mineral hot springs, summer and winter sports. Accessible by rail and highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Mount Revelstoke	Southeastern British Columbia, on west slope of Selkirks.	1914	100·0	Rolling mountain-top plateau. Colourful alpine meadows. Accessible by rail and highway. Summer accommodation in Park; all-year accommodation in town of Revelstoke. Championship ski runs and ski jump. Equipped camp-grounds.
St. Lawrence Islands	In St. Lawrence River between Morrisburg and Kingston, Ont.	1914	189·4 (acres)	Mainland area and 13 islands among Thousand Islands. Recreational and camping area. Accessible by highway: by boat from nearby mainland points.
Point Pelee	Southern Ontario, on Lake Erie.	1918	6·0	Recreational area. Remarkable beaches, southern flora. Resting place for migratory birds. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Kootenay	Southeastern British Columbia, on west slope of Rockies.	1920	543·0	Encloses Vermilion-Sinclair section of Banff-Windermere Highway. Broad valleys, deep canyons, mineral hot springs. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Prince Albert	Central Saskatchewan, north of Prince Albert.	1927	1,496·0	Forested region dotted with lakes and interlaced with streams. Summer playground and recreational area. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Riding Mountain	Southwestern Manitoba, west of Lake Winnipeg.	1929	1,148·0	Playground and wildlife sanctuary on summit of escarpment. Fine lakes. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Georgian Bay Islands	In Georgian Bay, north of Midland, Ont.	1929	5·4	Recreational and camping area. Unique pillars on Flowerpot Island. Accessible by boat from nearby mainland points. Equipped camp-grounds and annual youth camps on Beausoleil Island.
Cape Breton Highlands.	Northern part of Cape Breton Island, N.S.	1936	390·0	Rugged Atlantic coast line with mountain background. Fine seascapes. Recreational opportunities. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Prince Edward Island	North shore of Prince Edward Island.	1937	7·0	Strip 25 miles long on shores of the Gulf of St. Lawrence. Recreational area, fine bathing beaches. Accessible by highway. Hotel and bungalow cabin accommodation. Equipped camp-grounds.
Fundy	On Bay of Fundy between Moncton and Saint John in New Brunswick.	1948	79·5	Delightful recreational area. Forested region, wildlife sanctuary, rugged terrain. Bungalow cabin accommodation. Equipped camp-grounds.

4.—Location, Year Established, Area and Characteristics of National Parks—concluded

Park	Location	Year Established	Area	Characteristics
Wild Animal Parks			sq. miles	
Elk Island	Central Alberta, near Edmonton.	1913	75·0	Fenced preserve containing large herd of buffalo; also deer, elk and moose. Popular recreational area. Accessible by highway. Bungalow cabin accommodation and equipped camp-grounds.
Wood Buffalo[1]	Partly in Alberta and partly in Northwest Territories, between Athabasca and Slave Rivers.	1922	17,300·0	Immense region of forests and open plains. Home of largest remaining herd of bison on the Continent. Other wildlife abundant.
Historic Parks			acres	
Fort Anne	Nova Scotia, at Annapolis Royal.	1917	31·0	Site of early Acadian settlement. Museum and well-preserved earthworks.
Fort Beauséjour	New Brunswick, near Sackville.	1926	81·3	Site of French fort erected in middle of 18th century. Museum.
Fortress of Louisbourg.	Cape Breton Island, N.S., 25 miles from Sydney.	1941	339·5	Ruins of walled city erected by the French, 1720-40. Interesting excavations. Museum.
Port Royal	Port Royal, N.S., 8 miles from Annapolis Royal.	1941	20·5	Restoration of "Habitation" or first fort built in 1605 by Champlain, DeMonts and Poutrincourt.
Fort Chambly	Chambly, Que.	1941	2·5	French fort on Richelieu River, first built in 1665. Museum.
Fort Lennox	Ile-aux-Noix, Que., near St. Johns.	1941	210·0	Site of early French fort built in 1759.
Fort Wellington	Prescott, Ont.	1941	8·5	Defence post built 1812-13. Museum.
Fort Malden	Amherstburg, Ont.	1941	5·0	Site of defence post built 1797-99. Museums.
Fort Prince of Wales	Northern Manitoba, near Churchill.	1941	50·0	Ruins of fort built 1733-71 to secure control of Hudson Bay for England.
Lower Fort Garry	Manitoba, 20 miles north of Winnipeg.	1951	12·8	Stone-walled fort built by the Hudson's Bay Company between 1831 and 1839.
Fort Battleford	Saskatchewan, 4 miles south of North Battleford.	1951	36·7	North West Mounted Police post built in 1876.

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[1] Administered by the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources.

Provincial Parks.—In addition to the National Parks described above, most of the provinces have established Provincial Parks. These Parks, as in the case of the National Parks, are areas of great scenic or other interest maintained for the benefit of the public. The Provincial Parks are administered by the provincial governments concerned and, in most cases, have not yet reached the degree of development that marks the National Parks.

A detailed list of the Provincial Parks, showing location, year established, area and a short description in each case, is given in the 1954 Canada Year Book, pp. 26-30. The more important Parks in each province are mentioned briefly in the following outline.

Newfoundland.—Provincial park area in Newfoundland was increased recently from 42 sq. miles to 48 sq. miles. In addition to the 42 sq. miles on the west coast of the Province, which was set aside as Serpentine Park and is still undeveloped, six square miles on the Upper Humber River will be developed in the near future as a Provincial Park.

Quebec.—The Province of Quebec has established five Provincial Parks and four fish and game reserves. Four of the Parks areas are quite extensive in size. La Vérendrye Park, 140 miles northwest of Montreal, covers an area of 4,747 sq. miles; Laurentides Park, 25 miles north of Quebec City is 3,613 sq. miles in area; Trembling Mountain, 80 miles north of Montreal, 1,223 sq. miles; and Gaspesian Park, Gaspe Peninsula, 514 sq. miles. Mount Orford Park, situated 15 miles west of Sherbrooke, is 16 sq. miles in extent. The fish and game reserves together cover an area of more than 10,000 sq. miles. These Parks and reserves are wilderness areas of great scenic interest, for the most part mountainous country threaded with many rivers, lakes and streams and abounding in wildlife. In all of them, except Mount Orford, excellent fishing may be found and the Parks are organized to accommodate sportsmen and tourists in camps, cottages and lodges. Trembling Mountain is a famous resort area, in both summer and winter, and is easily reached by highway the year round from Montreal. The Department of Game and Fisheries administers the Parks and reserves as well as four salmon streams which are open to anglers.

Ontario.—There are six Provincial Parks in Ontario administered by the Department of Lands and Forests, all of which are Crown game preserves. Three of these Parks—Algonquin, 105 miles west of Ottawa (2,750 sq. miles), Rondeau, 70 miles east of Windsor (8 sq. miles), and Ipperwash, 50 miles north of Chatham (109 acres)—are easily reached by car and contain facilities for camping, picnicking, swimming, dancing, fishing, hiking and boating. Boys', girls' and adults' commercial camps are established in Algonquin Park. Quetico Park, in the Rainy River district of northwestern Ontario (1,720 sq. miles) and Sibley Park, on the north shore of Lake Superior (63 sq. miles), are accessible by car but are not developed. Superior Park, about 70 miles north of Sault Ste. Marie (540 sq. miles), may be reached by boat or rail and is undeveloped.

Manitoba.—Three areas in the Province may be considered as Provincial Parks, although they are not set up as such. Whiteshell Forest Reserve (1,088 sq. miles) and Cormorant Forest Reserve (580 sq. miles) are used as recreational areas. Another area known as the Northern Recreational Area (936 sq. miles) has not as yet been designated by Order in Council as either a forest reserve or a provincial park, but it also is used as a recreational area and has been included in the total of 2,604 sq. miles designated as provincial park area in Manitoba.

Saskatchewan.—Saskatchewan has ten Provincial Parks having a total area exceeding 1,000,000 acres. Cypress Hills, Duck Mountain, Greenwater Lake, Moose Mountain, Little Manitou and Valley Centre are operated as summer resorts with chalet, lodge, cabin and trailer accommodation, and camping and picnic facilities. Recreational activities include fishing, boating, swimming, golf, tennis, dancing, baseball, hiking, horseback riding, etc., and the Parks are all well fitted with playground and beach equipment for children. In Cypress Hills Park, elk, antelope, deer and beaver are plentiful and brook and other trout abound in the streams and lakes. Heavy stands of tall, straight lodgepole pine provide forest cover in this area. In Duck Mountain, Moose Mountain and Greenwater Lake Parks, moose, elk, deer, bear and beaver are common as well as several varieties of grouse. Heavy stands of spruce, poplar and white birch provide excellent cover for wildlife and pickerel, pike and perch are prevalent in the lakes.

Alberta.—In Alberta, 28 Provincial Parks have been established by proclamation or Order in Council but only 20 of them are being developed at the present time. Cypress Hills Park, an area of over 77 sq. miles situated in the southern part of the Province near the Saskatchewan border, is the largest of these Parks. The others include Aspen Beach, Beauvais Lake, Crimson Lake, Dillberry Lake, Pembina River, Gooseberry Lake, Kinbrook Island, Ma-Me-O Beach, Park Lake, Red Lodge, Rochon Sands, Saskatoon Island, Sylvan Lake, Taber, Little Bow, Woolford, Writing-on-Stone, Garner Lake and Vermilion. Picnic shelters, playground equipment and camp stoves are provided in these Parks which are maintained primarily for the recreation and enjoyment of residents of the Province.

British Columbia.—There are 66 Provincial Parks in British Columbia, covering an area of about 14,087 sq. miles. These Parks are classified as Class A, B, C and Special Parks. Class A Parks are those considered most highly for immediate recreational development and are strongly protected. Class B Parks are areas slated for development, valuable wilderness areas or places set aside for a specific reason. Class C Parks are intended primarily for the use of local residents and are generally managed by a Board. Special Parks, of which only one remains, were created in the past by Special Acts of the Legislature. The Parks are in all stages of development and dedicated to a variety of recreational uses. There are immense wilderness areas such as Tweedsmuir and Wells Gray Parks, and outstanding scenic and mountain places, which include Garibaldi, Mount Robson and E. C. Manning Parks. Thousands of city dwellers throng to the ski slopes of Mount Seymour or picnic at Cultus Lake Park. The formal gardens of Peace Arch are a monument to the goodwill between two nations. Vancouver Island has a chain of small forest parks that have achieved a tremendous popularity with tourists, the best known of which are Little Qualicum Falls and Miracle Beach. In addition to the Parks, the roadside camp-site system consists of 49 areas covering about 4·4 sq. miles.

Subsection 4.—The National Capital Plan*

The Master Plan to guide the long-range development of Ottawa and environs and to create a Capital in keeping with Canada's acheivements and status as a nation is now well launched and evidences of its progress are apparent in many sections of the Capital area.

Preparation of the Plan was begun in 1945 and a preliminary report was completed in 1948. The Final Report was forwarded to the Government by the National Capital Planning Committee and the Federal District Commission† and tabled in the House of Commons on May 22, 1951. Details of the Plan are given in the 1950 Year Book, pp. 18-20, and progress made is outlined in subsequent editions.

Since the inception of the National Capital Plan, the Commission, on the advice of the National Capital Planning Committee, has approved plans of various Federal Government departments for 12 major site developments and 100 buildings.

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* Revised by the Federal District Commission, Ottawa.

† The Commission is the federal agency responsible for the implementation of the Plan. *See* also p. 103.

Several of the new buildings have been completed and occupied, including the head office for Central Mortgage and Housing Corporation on the Montreal Road and the Dominion Bureau of Statistics at Tunney's Pasture. Others nearing completion are the Department of Veterans Affairs building on Wellington Street and the Government Printing Bureau at Hull. Approval has been given for the construction of a National Library of Canada building on the high ground overlooking the Ottawa River, west of the Supreme Court. The site is at present partly occupied by No. 1 Temporary Building, which is to be removed. The Library of Parliament, which was damaged by fire in 1953, was restored in 1954.

Work continued on a variety of other buildings and projects throughout the Capital area. Among these is an overpass on the Montreal Road designed and built by the Commission to provide a controlled entrance to the National Research Council establishment. Removal of the Aylmer Building permitted completion of the western approach to the Mackenzie King Bridge. The bridge, which was the first completed project in the National Capital Plan, opens up an east-west traffic artery over the Rideau Canal in Confederation Park. Work was also begun by the Commission on the development of the Hog's Back-Mooney's Bay Park. When completed this area will provide a very attractive 50-acre addition to the Commission's park system in the National Capital.

An important project during 1954 was the rebuilding of Sussex Street, a main artery on which are located several national institutions including the Public Archives, the Royal Canadian Mint, headquarters of the National Research Council, the Prime Minister's official residence and Rideau Hall, the residence of the Governor General. The project included the rebuilding of the Sussex Street bridges over the Rideau River at Rideau Falls. Street-car tracks were removed (motor-buses are now used on the route) and overhead wiring was placed underground. The project was carried out jointly by the City of Ottawa and the Federal District Commission.

Notable progress was made on the installation of new railway facilities in accordance with long-range plans to remove trackage from central Ottawa and Hull to the urban outskirts and subsequently to use the rights-of-way thus released for arterial roads. Land was acquired along the new rail belt for the construction of railway yards and for the relocation of industries requiring rail services. Since November 1953, CNR manifest freight trains from Montreal en route to Western Canada have been using the new belt line and yards, thus by-passing the central area of the Capital. The signal system has been installed in the new yards and as soon as other installations are completed the CNR will transfer its operations from the tracks and yards that bisect the Capital along Catherine Street. The FDC completed the acquisition of extra land to widen and link up this crosstown right-of-way to permit construction of an east-west traffic artery, averaging 200 feet wide, which will join with Highway 17 east and west of Ottawa. Seven miles of trackage has been lifted preparatory to construction of the western end of the new traffic artery. Plans were made by the City, with the co-operation of the FDC, to construct a new bridge at Hurdman's where the new east-west artery will cross the Rideau River.

The Commission continued its policy of using part of the National Capital Fund, into which are paid annual parliamentary grants of $2,500,000, to share in the costs of extending municipal water and sewage services in conformity with the Master Plan. Progress also continued on the acquisition of land for the new eastern and western parkways, which will run in a broad arc south from the vicinity of Rockcliffe Airport, cross the Rideau River near Hog's Back, and continue west and north to the Ottawa River near Britannia.

Construction of what will eventually be a 50-mile scenic driveway through Gatineau Park was begun, and the first two miles of the parkway from the Aylmer Road at Val Tetreau to the Mountain Road were completed and hard-surfaced. Construction was also begun on a new parkway to be known as Fairy Lake Parkway which will run from the Aylmer Road at the western section of Hull and skirt Fairy Lake to the east. Plans were also made for the extension of the parkway system along the Ottawa shore, east and west of the waterfront approach to the Champlain bridges.

Gatineau Park.—The development of Gatineau Park, located in the wooded hill-and-lake country of the Laurentians north of the City of Hull and about eight miles from the Capital, was begun by the FDC in 1937. It is the summer and winter playground of the National Capital, and is well provided with hiking trails and picnic and camping spots. Swimming, boating and fishing are enjoyed in the Park's many lakes and, in the winter, it is the skiing centre of the district.

Kingsmere, the country estate bequeathed to the nation by the Rt. Hon. William Lyon Mackenzie King and placed in the care of the Commission, is located on Kingsmere Lake at the south end of the Park. Land acquisitions by the Commission have increased the area of the Park to about 45,000 acres, and plans call for its ultimate development to about 80,000 acres.

Section 3.—Wildlife Resources and Conservation*

The Canadian Wildlife Service.—The Canadian Wildlife Service of the National Parks Branch, Department of Northern Affairs and National Resources, is responsible for attending to wildlife matters coming within the jurisdiction of the Federal Government, except those within the purview of the National Museum and certain activities closely related to Indian affairs.

Its functions include acting in an advisory capacity with regard to conservation and management of wildlife in the Northwest Territories; advising and co-operating with the National Parks and Historic Sites Division regarding fish and wildlife problems in the National Parks; and administration of the Migratory Birds Convention Act, in conjunction with the Royal Canadian Mounted Police and in co-operation with the provincial game authorities. The Canadian Wildlife Service also handles national and international problems relating to Canada's wildlife resources and co-operates with governmental and other agencies having similar interests and problems in Canada and elsewhere.

The Service issues permits for bird-banding in Canada and is the Canadian clearing-house for bird-banding information. It issues permits to qualified persons to take migratory birds for scientific purposes; to take and possess migratory birds for propagating purposes; to collect eiderdown; and to engage in the business of taxidermy.

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* Prepared by the Canadian Wildlife Service, Department of Northern Affairs and National Resources, Ottawa.

The Canadian Wildlife Service plans and carries out scientific investigations concerning numbers, food, shelter, migration, reproduction, diseases, parasites, predators, competitors and uses of wild creatures in Canada. In certain of such investigations, e.g., the mid-winter waterfowl inventory, it works in close co-operation with United States authorities conducting parallel studies.

The Service is responsible for the establishment and administration of bird sanctuaries under the Migratory Birds Convention Act. On Dec. 31, 1953, there were 90 bird sanctuaries with a total area of more than 1,800 sq. miles.

The Limnology Section of the Service concerns itself with the maintenance and improvement of sport fishing, the control of aquatic and semi-aquatic insects, the control of algæ, and other biological problems that arise in regard to water areas in the National Parks. It also acts in an advisory capacity to the Northern Administration and Lands Branch in connection with aquatic biological matters.

A series of special articles relating to the wildlife resources of Canada are being carried in the Year Book. Articles on 'Migratory Bird Protection in Canada', 'Game Fish in Canada's National Parks,' and 'The Barren-Ground Caribou' were carried in the 1951, 1952-53 and 1954 editions, respectively. The following article on 'Migratory Bird Legislation' describes the measures taken by Canada to fulfil its obligations under the Migratory Birds Treaty.

MIGRATORY BIRD LEGISLATION

Migratory birds are protected in Canada under the terms of the Migratory Birds Treaty, signed at Washington on Aug. 16, 1916, and put into effect by parallel legislation in Canada and in the United States. The Treaty does not, however, apply to all birds migrating between the two countries, but only to those classified in three main groups as follows:—

(1) **Migratory Game Birds.**—*Anatidæ* or waterfowl, including brant, wild ducks, geese and swans; *gruidæ* or cranes, including little brown, sandhill and whooping cranes; *rallidæ* or rails, including coots, gallinules and sora and other rails; *limicolæ* or shorebirds, including avocets, curlew, dowitchers, godwits, knots, oyster catchers, phalaropes, plovers, sandpipers, snipe, stilts, surf birds, turnstones, willet, woodcock and yellowlegs; and *columbidæ* or pigeons, including doves and wild pigeons.

(2) **Migratory Insectivorous Birds.**—Bobolinks, catbirds, chickadees, cuckoos, flickers, flycatchers, grosbeaks, humming birds, kinglets, martins, meadowlarks, nighthawks or bull bats, nuthatches, orioles, robins, shrikes, swallows, swifts, tanagers, titmice, thrushes, vireos, warblers, waxwings, whippoorwills, woodpeckers, wrens, and all other perching birds that feed entirely or chiefly on insects.

(3) **Migratory Non-game Birds.**—Auks, auklets, bitterns, fulmars, gannets, grebes, guillemots, gulls, herons, jaegers, loons, murres, petrels, puffins, shearwaters and terns.

Under the Treaty, no open season may be declared for the hunting of migratory insectivorous birds or migratory non-game birds. Open seasons for migratory game birds may be provided by the Canadian and United States Governments, but no such open seasons may begin before Sept. 1 in any year or may last beyond Mar. 10, or may be more than three and one-half months in length. In practice, opening dates for the various species and districts are generally later than Sept. 1, except in northern Canada, and only in limited areas and for particular species do any seasons extend beyond the end of January.

Many of the migratory game birds have enjoyed a continuous close season throughout Canada and the United States since the provisions of the Treaty came into effect, and have indeed ceased to be generally considered as game birds. Other species were never very popular for food or sport and, although open seasons may be provided for them, they are taken by comparatively few hunters.

The most important game birds in Canada are certain species of geese (including brant) and ducks. Swans and cranes enjoy virtually permanent protection, no open season on them having been declared since the Treaty came into effect. Open seasons for woodcock and Wilson's snipe are provided, although not in all provinces, but there have been no open seasons for other species of shore-birds since 1927. Most provinces have open seasons on some or all species in the rail group. In British Columbia there is an annual open season on band-tailed pigeons, but elsewhere in Canada it is not customary to hunt pigeons or doves and there is no open season for them.

In view of the importance of ducks and geese, special surveys of these birds are made by the wildlife authorities of Canada and the United States, working in close collaboration. A count is made at midwinter, when waterfowl are concentrated chiefly in the United States, with relatively small numbers on the eastern and western coasts of Canada and a few stragglers in the central provinces. This count, taken at a time when hunting of waterfowl has almost or quite ceased throughout the two countries, makes possible a fairly close estimate of the breeding population available for the following spring.

The coming of spring is the signal for the majority of North American waterfowl to forsake their winter resorts in favour of breeding-grounds farther north or at a higher altitude. A large proportion of the duck population selects the sloughs, marshes and lake-shores of the Prairie Provinces as their favoured nesting area. Trumpeter swans prefer to winter in British Columbia and to rear their young on the high prairies of Alberta and in some other remote areas, the locations of which are still in doubt. The little Ross's goose, a more ambitious bird, winters in California and nests near the mouth of the Perry River, north of the Arctic Circle. In fact, almost every district in Canada where suitable nesting territory is available receives its quota of one or more species of waterfowl during the breeding season.

Weather conditions during the spring and summer are of great importance to the stock of North American waterfowl. A cold, wet spring has serious adverse effects on the early attempts at nesting. Also an unusually hot and dry summer, drying up ponds and marshes before the young ducks are ready to fly, may wipe out thousands of fledglings over wide areas. Epidemic diseases, predation, prairie and forest fires, and farming operations also present hazards to both parents and young.

To obtain an adequate comprehension of the waterfowl situation as it develops between the midwinter census and the following hunting season, wildlife experts maintain a constant watch on the chief breeding areas in spring and summer. A series of extensive surveys is made by officers of the Canadian Wildlife Service, the United States Fish and Wildlife Service, provincial game departments, and other organizations. Sample counts of waterfowl on definite areas are taken, which are compared with similar counts for the same areas in preceding years. Conditions affecting nesting success, such as snow, rain, drought, spring run-off, water levels, temperature fluctuations, predation and disease, are carefully noted. Consequently, as the summer advances, wildlife authorities are able to form a well-founded estimate of continental waterfowl conditions, and to tell with reasonable accuracy how the autumn crop of waterfowl in different areas will compare with that of recent years. Thus the surveys provide a sound scientific basis for the waterfowl hunting regulations for the year.

It may be of advantage here to distinguish clearly between the Migratory Birds Treaty, the Migratory Birds Convention Act, and the Migratory Bird Regulations.

The Migratory Birds Treaty is an international treaty between Canada and the United States which defines the groups of birds affected by it, stipulates certain limitations on open seasons and on the taking and shipment of migratory birds, and provides for the issuing of special permits for scientific and propagating purposes and for the control of birds damaging crops and other interests. The terms of the Treaty are binding on both Canada and the United States and may be altered only by a new treaty.

The Migratory Birds Convention Act is a law passed by the Parliament of Canada, setting forth the measures by which Canada fulfils her obligations under the Migratory Birds Treaty. It may be amended by the Parliament of Canada, but any amendment must be in conformity with the terms of the Treaty. The Act provides for the making, by Order in Council, of regulations for the protection of migratory birds; it also makes provision for enforcement of the Act itself and of such regulations, with penalties for violations.

The Migratory Bird Regulations, authorized by the Act, govern the details of migratory bird protection, including open seasons for migratory game birds, restrictions on hunting methods and appliances, and regulations for the issue and use of permits.

In general, wildlife legislation in Canada is a purely provincial matter. The special federal interest in migratory bird legislation is derived from Sect. 132 of the British North America Act, which provides that the Government of Canada shall have all powers required to carry out obligations imposed by an external treaty on Canada or on any of its provinces. Consequently, while the provinces retain property in migratory birds within their borders, the adoption of laws to carry out the terms of the Migratory Birds Treaty is a federal responsibility. The provinces are not precluded from passing game laws which cover migratory birds, but such provincial laws, in so far as they apply to migratory birds, must be not less restrictive than federal laws on the same subject.

There is no difficulty in the practical application of the division of federal and provincial powers. Several provinces incorporate in their game laws the provisions of the federal migratory bird legislation. The game and fishery officers of all ten provinces are *ex officio* game officers under the Migratory Birds Convention Act, and enforce that Act and Regulations thereunder as well as the game and fishery laws of their own provinces.

The annual revision of the Migratory Bird Regulations is one of the important functions of the Canadian Wildlife Service. The main basis of this work is the knowledge of the continental waterfowl situation derived from the midwinter count and the summer surveys. Some items for revision may be under consideration for several months but the peak of the work is attained during June and July. As a rule, the revision is completed and the new Regulations are approved by Order in Council in July or early August, permitting announcement some weeks before the opening of the earliest waterfowl-hunting season in Canada.

In revising the Regulations, the Canadian Wildlife Service works in closest co-operation with game authorities of the provinces and territories. An annual conference of representatives of provincial and federal wildlife services is held at Ottawa, usually in June, by which time preliminary reports of the waterfowl situation are available. At this conference, free discussion of wildlife matters leads to agreement on many questions affecting the Regulations, or clarifies problems for future study. The conference does not frame amendments to the Regulations, but often passes resolutions on which amendments may be based.

By the month of July, a sufficient number of reports have been received from all parts of Canada to permit a comprehensive view of the waterfowl situation. The Canadian Wildlife Service is the focal point for receipt and analysis of this information and, because of the fact that provincial and federal wildlife services are agreed on the basic principles of conservation and co-operate in a spirit of mutual confidence, there is no undue delay in working out the necessary revisions to the Regulations. The recommendations of the individual provinces regarding dates of open seasons and bag and possession limits form the basis of corresponding provisions applying within their respective borders. The Regulations as a whole are concurred in by all the provinces and by federal legal authorities before being submitted to the Governor General in Council for approval.

It is customary for the Regulations to contain a provision that they shall come into effect on the first day of September of the year in which they are adopted; thus each year's Regulations have the force of law from Sept. 1 until Aug. 31 of the following year. The annual effective date, Sept. 1, should not be confused with the date of adoption by Order in Council (which is generally some weeks earlier, in order that the Regulations may be thoroughly publicized before they come into effect) or the dates of beginning of open seasons, which vary considerably across Canada.

As soon as the Regulations are adopted by Order in Council they are given immediate publicity throughout Canada by press and radio. Posters and abstracts are issued by the Canadian Wildlife Service and the provinces. The revised Regulations are published in the *Canada Gazette*. A consolidation of the Migratory Birds Convention Act and the Regulations is printed as soon as possible after the latter are adopted, and is distributed by the Canadian Wildlife Service to all persons and organizations interested.

PART III.—CLIMATE AND TIME ZONES

Section 1.—Climate

A comprehensive discussion of the climatic regions of Canada is available in the 1948-49 Year Book, pp. 41-62, and detailed tabulations of climatic factors covering 36 meteorological stations located mostly at well-known or populous centres are given in the 1950 Year Book, pp. 35-70. Other articles appearing in previous editions are listed under "Climate and Meteorology" in Chapter XXIX of this volume.

Table **1** gives long-term temperature and precipitation data for 35 representative Canadian stations; Tables **2** and **3** provide monthly temperature and precipitation data during 1953 for these same stations. These are mostly well-known or populous places with climates fairly representative of a considerable area. The figures given under "Temperatures" are, of course, averages obtained over the period of observation in each case. Under "Precipitation", in calculating the annual total, inches of rain is considered the total depth of water accumulated on a hypothetical horizontal impervious surface without evaporation. Similarly, the depth of snow given is that which falls on a horizontal surface, without settling, melting or sublimation. Because the depth of water obtained from melting newly fallen snow is roughly one-tenth of the depth of the snow, the total precipitation is obtained by adding together the total rainfall and one-tenth of the depth of the newly fallen snow. A day with rain is, for the purpose of these tables, one on which 1/100 of an inch or more falls and a day with snow is one with at least 1/10 of an inch of newly fallen snow. Whenever the temperature four feet above the ground falls to 32°F. or lower, the day is counted as a day with frost. The average date of the last spring frost and of the first frost in autumn marks the approximate period continuously free from frost.

1.—Long-Term Temperature and Precipitation Data for 35 Representative Stations

Station	Height Above Sea	Length of Record	TEMPERATURES (Fahrenheit)					Heating Factor	Killing Frost Average Dates		PRECIPITATION (inches)							
	ft.	yrs.	Annual	Jan.	July	Highest on Record 1921-50	Lowest on Record 1921-50	Day-Degrees[1]	Last in Spring	First in Autumn	Annual Total	Annual Snow	Jan.	Apr.	July	Oct.	Number of Days Rain	Number of Days Total
Gander, N'f'ld.	482	14	39·2	19·0	62·1	91	−16	8,767	June 1	Oct. 3	39·50	119·2	2·63	2·57	3·61	4·09	129	199
St. John's (Torbay), N'f'ld.	463	10	40·6	23·9	59·4	86	−10	8,876	June 2	Oct. 10	59·99	141·3	5·22	5·02	3·97	5·59	147	208
Goose Bay, N'f'ld.	144	10	31·7	0·0	61·2	100	−35	12,148	June 10	Sept. 14	29·05	144·1	1·93	1·76	3·28	2·42	88	166
Charlottetown, P.E.I.	186	30	42·5	18·8	66·6	98	−23	8,263	May 16	Oct. 14	43·13	112·7	4·09	2·83	2·85	4·17	119	162
Annapolis Royal, N.S.	10	30	44·8	24·4	65·3	91	−13	7,665	May 20	Oct. 6	41·35	68·0	4·01	2·85	3·15	3·86	115	140
Halifax, N.S.	83	30	44·4	24·4	65·0	94	−21	7,350	May 13	Oct. 12	54·26	64·1	5·16	4·48	3·62	5·12	130	156
Sydney, N.S.	197	30	42·8	22·7	65·0	98	−23	7,896	May 29	Oct. 13	50·61	96·6	4·86	3·77	2·98	5·22	127	165
Chatham, N.B.	112	26	39·7	12·4	66·1	102	−43	8,887	May 21	Sept. 28	36·33	84·2	2·59	2·78	3·10	3·86	107	151
Fredericton, N.B.	164	30	41·2	14·2	66·6	102	−38	8,663	May 20	Sept. 23	41·90	88·4	3·18	3·37	3·35	4·16	108	149
Saint John, N.B.	119	30	42·0	19·8	61·8	93	−21	8,081	May 4	Oct. 16	47·69	83·0	4·55	3·62	3·28	4·77	134	168
Arvida, Que.	375	19	36·6	4·2	65·2	95	−42	10,585	May 20	Sept. 19	38·77	115·7	2·87	2·53	4·17	3·45	112	176
Lennoxville, Que.	498	30	41·6	13·2	66·6	99	−48	8,996	May 31	Sept. 10	40·11	96·5	3·37	3·01	4·08	3·40	104	150
Montreal, Que.	187	30	43·7	15·4	70·4	97	−29	8,059	Apr. 28	Oct. 17	41·80	100·8	3·54	3·37	3·97	3·40	112	164
Fort William, Ont.	644	30	36·8	7·6	63·4	91	−38	10,045	June 4	Sept. 7	27·62	68·8	1·67	1·81	3·26	2·52	82	142
Kapuskasing, Ont.	752	13	33·4	−0·1	63·2	101	−53	11,374	June 14	Sept. 5	34·51	124·0	2·40	2·03	3·63	2·56	95	182
Ottawa, Ont.	260	30	41·6	12·0	68·6	102	−35	8,674	May 11	Sept. 29	34·89	80·5	2·67	2·62	3·53	2·70	98	139
St. Catharines, Ont.	347	20	48·4	26·7	71·7	104	−12	6,607	May 5	Oct. 21	30·72	47·1	2·54	2·47	2·36	2·38	99	132
Toronto, Ont.	379	30	47·0	24·5	70·8	105	−22	7,196	May 3	Oct. 15	30·94	54·6	2·72	2·55	3·23	2·29	109	145
Churchill, Man.	43	21	18·8	−16·4	55·0	90	−50	15,735	June 28	Aug. 30	14·41	45·1	0·39	1·21	2·51	1·53	52	101
The Pas, Man.	890	29	31·4	−6·2	64·9	100	−54	12,160	May 30	Sept. 9	16·98	53·2	0·77	0·93	2·42	1·11	59	102
Winnipeg, Man.	786	30	36·6	0·6	68·4	108	−43	10,801	May 27	Sept. 15	19·72	49·4	0·93	1·20	2·72	1·44	67	118
Prince Albert, Sask.	1,414	30	34·0	−1·3	65·3	103	−56	11,337	May 30	Sept. 10	15·60	45·1	0·60	1·08	2·15	0·99	62	116
Regina, Sask.	1,884	30	36·7	2·3	66·6	110	−54	10,630	June 5	Sept. 6	15·09	40·1	0·65	0·81	2·13	0·85	59	109
Beaverlodge, Alta.	2,500	30	36·1	9·7	60·2	98	−53	10,950	May 30	Sept. 1	17·32	68·2	1·19	0·87	2·31	1·04	76	127
Calgary, Alta.	3,540	30	39·0	15·8	62·4	97	−46	9,127	June 3	Sept. 3	17·47	57·0	0·55	1·26	2·41	0·89	57	101
Edmonton, Alta.	2,219	30	36·8	7·7	62·9	99	−51	9,905	May 29	Sept. 6	17·63	52·9	0·90	1·10	3·11	0·84	73	133
Medicine Hat, Alta.	2,365	30	42·2	13·7	70·2	106	−49	8,495	May 15	Sept. 18	13·55	41·6	0·72	0·99	1·38	0·72	56	100
Cranbrook, B.C.	3,013	30	41·2	15·6	64·4	102	−42	8,760	June 10	Aug. 27	14·46	54·5	1·58	0·61	0·85	1·11	69	106
Nelson, B.C.	2,035	30	45·8	24·4	67·2	103	−17	7,278	May 10	Oct. 2	28·52	90·0	3·48	1·59	1·15	2·85	102	131
Penticton, B.C.	1,121	30	48·0	26·7	68·7	105	−16	6,346	May 7	Oct. 3	11·50	25·4	0·98	0·83	0·78	0·98	83	102
Prince George, B.C.	2,218	30	38·9	14·6	59·6	102	−58	8,996	June 17	Aug. 24	22·17	66·6	1·85	0·96	2·14	2·12	123	162
Victoria, B.C.	228	30	50·2	39·2	60·0	95	6	4,987	Feb. 28	Dec. 7	26·18	10·1	4·05	1·17	0·49	2·90	141	144
Dawson, Y.T.	1,062	30	23·8	−16·0	59·8	95	−73	14,620	June 4	Aug. 21	13·99	52·5	0·88	1·63	1·72	1·07	63	117
Coppermine, N.W.T.	13	19	11·7	−19·0	49·0	87	−58	19,710	June 28	Aug. 18	10·87	55·5	0·60	0·67	1·52	1·23	40	103
Fort Good Hope, N.W.T.	214	29	17·8	−21·0	59·8	94	−69	17,520	June 1	Aug. 11	12·18	57·3	0·72	0·50	1·55	1·20	46	106

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[1] Day-degrees represent the difference in temperature between the mean temperature of the air and the temperature of 65°F. multiplied by the number of days during which the outside temperature was lower than that figure, computed for the period Sept. 1 to May 31. Fuel consumption for heating purposes will be proportional to these totals.

2.—Temperature Data for 35 Weather Stations, by Month, 1953

Station	Monthly Mean Temperatures (Fahrenheit)												Annual Mean Temperature	Temperature Difference from Normal for Year	Annual Temperature Extremes	
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.			Highest	Lowest
Gander, N'f'ld	23·9	23·8	25·0	39·9	41·4	55·4	64·2	59·4	53·8	42·2	36·0	26·2	40·9	1·7	88·4	−1·3
St. John's (Torbay), N'f'ld	27·1	27·6	26·2	39·0	40·7	54·0	61·5	57·5	54·2	44·7	39·0	31·4	41·9	1·3	80·6	7·5
Goose Bay, N'f'ld	1·5	6·3	16·3	37·0	41·4	52·6	61·3	56·9	48·7	38·4	25·4	5·4	32·6	0·9	90·0	−24·4
Charlottetown, P.E.I	24·8	24·6	29·2	40·8	45·8	58·1	65·6	62·4	58·8	46·9	41·0	31·3	44·1	1·6	81·6	−2·2
Annapolis Royal, N.S	30·0	29·8	34·6	44·9	52·2	59·7	64·4	62·6	58·6	50·2	43·2	36·7	47·2	1·9	86·0	7·0
Halifax, N.S	31·7	30·0	33·7	44·6	49·9	59·3	66·2	64·8	61·2	51·9	45·3	37·8	48·0	3·6	88·6	7·4
Sydney, N.S	28·4	26·9	29·2	40·6	43·9	56·8	65·1	62·8	58·2	47·8	42·1	33·4	44·6	1·8	85·2	4·8
Chatham, N.B	20·7	21·6	27·3	40·0	48·8	61·0	67·1	63·4	58·9	46·3	39·0	26·5	43·4	3·7	94·2	−5·8
Fredericton, N.B	21·7	22·2	29·7	42·8	52·2	61·1	66·8	63·7	58·6	46·5	39·2	28·2	44·4	3·2	92·0	−10·8
Saint John, N.B	26·8	26·0	32·2	42·8	49·6	58·0	63·6	61·7	57·8	48·8	42·2	33·0	45·2	3·2	86·8	−2·0
Arvida, Que	8·6	9·5	24·7	39·7	48·0	61·2	64·2	61·6	54·9	45·2	36·4	17·8	39·3	2·7	94·5	−26·0
Lennoxville, Que	20·8	20·1	30·6	43·0	54·6	63·2	67·2	63·8	57·0	47·6	40·3	27·9	44·7	3·1	96·0	−27·0
Montreal, Que	21·9	23·2	32·2	44·8	58·0	67·4	71·4	68·8	60·7	51·3	41·8	29·4	47·6	3·9	93·6	−8·0
Fort William, Ont	10·1	12·0	24·5	36·0	47·0	57·6	63·3	64·8	51·8	44·6	33·0	15·0	38·3	1·5	90·5	−31·0
Kapuskasing, Ont	1·6	7·5	19·6	31·8	45·6	56·4	64·1	63·6	48·8	43·8	31·3	10·4	35·4	2·0	91·6	−43·0
Ottawa, Ont	19·4	21·3	31·6	42·2	56·8	65·2	70·0	67·6	58·7	48·9	39·6	26·2	45·6	4·0	96·8	−10·4
St. Catharines, Ont	31·1	32·4	37·2	44·0	56·8	68·6	71·8	70·7	63·4	53·1	44·7	35·4	50·8	2·4	97·0	9·0
Toronto, Ont	29·7	30·7	36·5	44·8	56·9	67·2	72·2	71·6	63·2	53·6	44·2	33·9	50·4	3·4	99·8	4·7
Churchill, Man	−20·8	−8·2	0·9	13·4	26·5	38·3	51·2	55·9	42·1	32·7	23·0	−7·4	20·6	1·8	88·2	−41·7
The Pas, Man	−6·5	6·0	13·5	29·4	44·9	55·5	63·0	64·3	50·0	42·0	28·6	4·6	33·0	1·6	89·5	−37·2
Winnipeg, Man	3·2	6·2	20·8	35·8	51·4	61·5	66·2	68·2	53·4	49·7	32·2	12·6	38·4	1·8	93·1	−27·2
Prince Albert, Sask	−3·7	8·2	13·9	31·7	47·2	56·4	62·9	63·6	50·1	43·1	28·0	9·7	34·3	0·3	94·0	−47·8
Regina, Sask	7·4	11·2	19·0	33·4	48·6	59·8	65·4	66·2	53·6	47·3	32·3	17·4	38·5	1·8	90·6	−38·6
Beaverlodge, Alta	−5·2	25·6	22·6	32·0	51·4	54·1	57·9	58·2	49·0	43·7	28·7	20·3	36·5	0·4	84·2	−41·3
Calgary, Alta	11·8	25·0	27·9	31·2	46·9	53·6	60·4	60·2	51·8	47·4	34·3	27·1	39·8	0·8	88·2	−21·2
Edmonton, Alta	2·0	22·6	23·5	35·0	51·8	57·2	61·4	62·0	52·4	46·6	32·8	24·6	39·3	2·5	85·3	−35·4
Medicine Hat, Alta	15·7	27·4	29·5	36·8	52·2	60·1	67·2	68·0	59·0	52·2	40·2	28·4	44·7	2·5	102·2	−21·5
Cranbrook, B.C	29·9	26·6	35·2	40·2	50·1	56·1	62·6	63·5	53·2	44·5	32·8	27·5	43·5	2·3	100·0	−5·0
Nelson, B.C	36·5	34·8	38·9	45·2	55·4	59·3	68·4	65·8	57·5	48·7	40·9	32·8	48·7	2·9	96·0	17·0
Penticton, B.C	36·8	36·5	42·0	46·3	55·8	60·0	67·4	66·7	57·8	48·0	41·8	36·0	49·6	1·6	98·0	15·0
Prince George, B.C	6·6	26·4	30·2	36·8	50·9	54·9	58·6	57·0	49·1	43·4	35·2	26·0	39·6	0·7	88·3	−54·6
Victoria, B.C	43·1	42·5	44·8	48·7	54·0	54·8	60·0	61·2	58·8	52·4	48·2	44·0	51·0	0·8	82·3	30·3
Dawson, Y.T	−28·4	−0·2	5·0	36·3	50·0	59·4	60·8	55·8	44·5	27·3	8·0	0·7	26·6	2·8	85·8	−55·2
Coppermine, N.W.T	−24·2	−17·5	−8·9	8·9	25·4	39·1	49·6	50·4	39·4	23·4	0·9	−14·5	14·3	2·6	78·8	−49·3
Fort Good Hope, N.W.T	−29·9	−10·6	−9·2	20·6	40·6	54·0	59·0	54·2	41·8	22·4	−2·6	−18·2	18·5	0·7	86·0	−55·0

3.—Precipitation Data for 35 Weather Stations, by Month, 1953

Station	Monthly Precipitation (inches)												Annual Precipitation (inches)			Total Inches Precipitation Difference from Normal for Year
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Rainfall	Snowfall	Total Precipitation	
Gander, N'f'ld	1·71	2·58	3·16	3·61	2·09	4·17	2·08	6·06	2·18	5·38	2·08	3·15	29·42	88·3	38·25	—1·25
St. John's (Torbay), N'f'ld	4·76	4·83	5·07	9·78	4·90	2·95	2·67	3·62	3·09	8·68	4·96	10·61	54·98	109·4	65·92	5·93
Goose Bay, N'f'ld	3·77	4·94	2·07	3·51	1·16	3·43	3·31	9·06	2·99	1·73	2·07	4·19	23·16	190·7	42·23	13·18
Charlottetown, P.E.I	4·07	4·82	3·33	2·86	3·23	1·54	3·45	5·35	3·24	5·18	2·77	5·78	40·44	51·8	45·62	2·49
Annapolis Royal, N.S	5·03	8·31	4·19	2·56	2·56	2·31	5·41	3·53	5·10	3·55	2·27	6·97	48·24	35·5	51·79	10·44
Halifax, N.S	6·99	7·51	4·52	3·73	3·32	3·36	4·60	4·71	2·75	7·52	4·59	8·07	56·39	52·8	61·67	7·41
Sydney, N.S	3·74	4·77	5·70	4·03	2·92	2·07	3·77	3·04	2·52	5·03	2·64	7·79	42·39	56·3	48·02	—2·59
Chatham, N.B	4·45	4·29	8·13	4·23	3·31	1·18	3·24	1·79	4·68	3·78	3·48	4·70	36·14	111·2	47·26	10·93
Fredericton, N.B	4·17	3·78	4·15	3·83	3·22	2·02	6·35	2·38	3·73	3·41	3·47	5·52	40·46	55·7	46·03	4·13
Saint John, N.B	6·35	6·76	6·68	3·65	3·22	2·49	4·88	4·72	5·99	4·16	2·81	7·62	55·76	35·7	59·33	11·64
Arvida, Que	3·14	1·40	2·53	2·38	1·25	2·01	3·06	1·16	4·59	0·72	1·77	3·42	18·01	94·2	27·43	—11·34
Lennoxville, Que	4·67	2·26	3·21	2·78	3·69	3·54	5·20	2·29	2·19	3·41	1·71	4·19	31·72	74·2	39·14	—0·97
Montreal, Que	3·81	1·96	4·29	3·75	3·50	3·62	2·68	1·84	2·92	1·69	1·93	4·28	30·66	56·1	36·27	—5·53
Fort William, Ont	1·86	0·85	2·25	0·95	6·29	3·11	0·74	1·82	3·78	0·80	1·98	2·49	20·01	69·1	26·92	—0·70
Kapuskasing, Ont	2·90	2·84	2·41	1·99	3·30	2·99	2·29	3·28	6·05	0·66	3·61	2·90	19·02	162·0	35·22	0·71
Ottawa, Ont	2·43	0·92	4·19	2·63	2·03	2·60	1·95	2·51	4·12	1·21	1·29	3·50	25·58	38·0	29·38	—5·51
St. Catharines, Ont	1·36	0·61	4·30	1·46	5·74	2·06	1·96	4·59	4·75	0·65	2·02	1·96	29·82	16·4	31·46	0·74
Toronto, Ont	1·79	1·09	2·84	2·51	4·36	1·79	2·76	1·99	3·81	0·84	1·81	1·82	24·79	26·2	27·41	—3·53
Churchill, Man	0·26	0·70	1·13	1·40	0·63	1·05	1·51	0·97	4·27	0·59	1·27	1·21	8·10	68·9	14·99	0·58
The Pas, Man	1·18	0·26	2·77	0·29	1·52	2·98	4·14	1·25	4·57	0·14	1·18	1·38	14·36	73·0	21·66	4·68
Winnipeg, Man	1·79	1·05	1·21	1·59	4·72	4·33	7·77	1·05	2·86	1·25	0·23	0·43	22·38	59·0	28·28	8·56
Prince Albert, Sask	1·32	0·77	2·18	0·49	1·42	1·86	2·14	2·48	0·76	0·11	0·56	1·62	8·65	70·6	15·71	0·11
Regina, Sask	0·95	0·89	1·42	0·81	3·51	4·06	3·48	0·92	1·37	0·62	0·10	0·68	14·18	46·3	18·81	3·72
Beaverlodge, Alta	3·43	0·42	0·99	0·80	2·02	2·63	2·13	0·74	1·30	0·40	0·94	0·80	9·49	71·1	16·60	—0·72
Calgary, Alta	0·95	1·52	0·79	3·03	1·74	5·88	2·59	2·16	1·08	0·02	0·29	1·18	14·99	62·4	21·23	3·76
Edmonton, Alta	1·98	0·34	1·76	1·21	1·82	4·31	7·51	4·58	0·34	0·31	0·39	0·97	19·67	58·5	25·52	7·89
Medicine Hat, Alta	0·75	0·67	1·65	2·48	3·43	3·71	1·67	1·50	1·45	[1]	0·29	0·74	13·84	45·0	18·34	4·79
Cranbrook, B.C	2·90	2·05	0·40	1·40	0·20	3·00	0·25	1·92	0·66	0·53	0·96	1·06	9·13	62·0	15·33	0·87
Nelson, B.C	4·91	3·83	2·46	2·04	2·40	3·76	1·06	3·00	1·10	2·41	2·50	1·94	25·89	55·2	31·41	2·89
Penticton, B.C	1·60	0·49	0·99	0·93	1·17	1·22	0·82	1·77	0·20	0·22	0·76	0·87	9·68	13·6	11·04	—0·46
Prince George, B.C	3·86	1·09	1·13	1·49	0·81	3·65	2·15	2·99	2·03	2·00	1·01	1·13	15·78	75·6	23·34	1·17
Victoria, B.C	11·53	2·07	0·77	0·56	0·52	1·04	0·58	0·25	2·01	2·31	3·01	7·27	31·70	2·2	31·92	5·74
Dawson, Y.T	0·24	0·69	0·24	0·37	1·25	1·26	1·65	2·78	1·06	0·35	0·14	0·73	8·25	25·1	10·76	—3·23
Coppermine, N.W.T	0·11	0·36	0·18	0·10	0·01	0·31	0·86	4·15	0·54	0·60	0·66	0·04	5·99	19·3	7·92	—2·95
Fort Good Hope, N.W.T	0·12	0·57	0·53	0·11	0·83	1·97	0·41	1·32	0·53	2·05	0·86	0·57	4·61	52·6	9·87	—2·31

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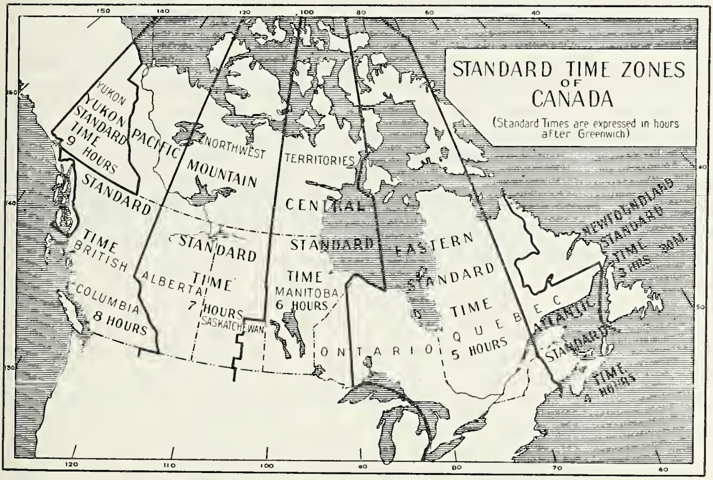
[1] Less than 0.005 in.

Section 2.—Standard Time and Time Zones

Standard time, which was adopted at a World Conference held at Washington, D.C., in 1884, sets the number of time zones in the world at 24, each zone extending over one twenty-fourth of the surface of the earth and including all the territory between two meridians 15° longitude apart. Standard time is Greenwich time, all other time zones being a definite number of hours either in advance of or behind Greenwich.

Canada has seven time zones, the most easterly being Newfoundland standard time, three hours and thirty minutes behind Greenwich mean time. In the west, Pacific standard time, used throughout British Columbia and part of the Northwest Territories, is eight hours behind Greenwich, and Yukon standard time, used throughout the Yukon Territory, is nine hours behind Greenwich. Some municipalities adopt the time used by the local railways which, in certain cases, differs from the standard. There are also villages that adopt such time as seems best to suit their convenience, but, in general, the legal boundaries of the different time zones are actually in use. The boundaries of the time zones in Canada are shown on the following map.


STANDARD TIME ZONES OF CANADA
(Standard Times are expressed in hours after Greenwich)
150
140
120
100
80
60
40
YUKON
YUKON STANDARD TIME 9 HOURS
PACIFIC STANDARD TIME 8 HOURS
BRITISH COLUMBIA
NORTHWEST TERRITORIES
MOUNTAIN STANDARD TIME 7 HOURS
ALBERTA
SASKATCHEWAN
CENTRAL STANDARD TIME 6 HOURS
MANITOBA
ONTARIO
EASTERN STANDARD TIME 5 HOURS
QUEBEC
NEWFOUNDLAND STANDARD TIME 3 HRS. 30M.
ATLANTIC STANDARD TIME 4 HOURS
120
110
100
90
80
70
60

Daylight Saving Time.—For some years before World War I there was active propaganda, particularly in the cities, for the use of an earlier time, usually referred to as 'daylight saving time', one hour ahead of standard time, during the summer months. It was considered, from the economic as well as from the health point of view, that people in industrial towns and cities would gain by having longer periods of sunlight at their disposal for recreation. Canada adopted daylight saving time in 1918, but the Canadian Act lapsed at the end of that year. Since that date, however, various towns and cities have adopted daylight-saving by-laws for varying periods in the summer months.

Legal Authority for the Time Zones.—Most of the regulations made in Canada concerning standard time have been passed by the provincial legislatures and the Northwest Territories Council. The exceptions include: the Daylight Saving Act of 1918; an Order in Council (P.C. 4994) issued in 1940 requiring the continuation, for an additional period, of daylight saving time in a number of places in Ontario and Quebec where it had already been in force for the summer; and an Order in Council in 1942 (P.C. 547) making daylight saving time nation-wide, and later revoked by Order in Council (P.C. 6102), ending the observance on Sept. 30, 1945. Legislation, besides determining the boundaries of zones, regulates such matters as the times of coming into effect or expiration of Acts, ordinances, contracts and agreements, times of opening and closing registration offices, law courts, post offices and other public offices, times of open or close seasons for game, and times of opening and closing business houses and places of amusement.

PART IV.—ASTROPHYSICS

The science of astrophysics is carried on by three Canadian institutions: the Dominion Observatory, Ottawa, Ont., the Dominion Astrophysical Observatory, Victoria, B.C. (both operated by the Department of Mines and Technical Surveys), and the David Dunlap Observatory, associated with the University of Toronto. Of the two Government institutions, the Dominion Observatory at Ottawa has specialized mainly in the astronomy of position in solar physics and in various branches of geophysical work, and the major effort in astrophysics has been concentrated at the Dominion Astrophysical Observatory at Victoria, B.C. The David Dunlap Observatory was founded in 1935 and is equipped with very fine astrophysical equipment of a kind similar to that in use at Victoria. It performs not only the function of a privately financed and administered research institution but is also the nucleus of a university department of astronomy. A special article dealing with the work of the Dominion Astrophysical Observatory at Victoria, B.C., appears in the 1948-49 Year Book, pp. 63-71.

CHAPTER II.—CONSTITUTION AND GOVERNMENT

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—CONSTITUTION OF CANADA

The Canadian federal state was established by the British North America Act, 1867, which united the three British North American provinces of Canada, New Brunswick and Nova Scotia into one country, divided into four provinces, namely, Ontario, Quebec, New Brunswick and Nova Scotia. British Columbia entered the Union in 1871 and Prince Edward Island in 1873. The Province of Manitoba was created in 1870, and the Provinces of Saskatchewan and Alberta in 1905, out of portions of the territories formerly held by the Hudson's Bay Company and admitted to the Union in 1870. Newfoundland entered the Union in 1949. At the present time, therefore, Canada consists of ten provinces and the remaining territories known as the Yukon Territory and the Northwest Territories.

The British North America Act of 1867 divided legislative and executive authority between Canada on the one hand and the provinces on the other. Judicial authority was not similarly divided, provincial and federal courts having jurisdiction with respect to both federal and provincial laws.

While the British North America Act of 1867 together with its subsequent amendments is popularly regarded as the Constitution of Canada, it is not an exhaustive statement of the laws and rules by which Canada is governed. The Constitution of Canada in its broadest sense includes other statutes of the United Kingdom Parliament (e.g., the Statute of Westminster, 1931), statutes of the Parliament of Canada relating to such matters as the succession to the Throne, the demise of the Crown, the Governor General, the Senate, the House of Commons,

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1.—Provinces and Territories of Canada, Dates of Admission to Confederation, Legislative Process by which Admission was Effected and Present Areas

Province, Territory or District	Date of Admission or Creation	Legislative Process	Present Area (sq. miles)		
			Land	Fresh Water	Total
Ontario[1]	July 1, 1867	Act of Imperial Parliament — The British North America Act, 1867 (30–31 Vict., c. 3), and Imperial Order in Council, May 22, 1867.	348,141	64,441	412,582
Quebec[2]	July 1, 1867		523,860	71,000	594,860
Nova Scotia	July 1, 1867		20,743	325	21,068
New Brunswick	July 1, 1867		27,473	512	27,985
Manitoba[3]	July 15, 1870	Manitoba Act, 1870 (33 Vict., c. 3) and Imperial Order in Council, June 23, 1870	219,723	26,789	246,512
British Columbia	July 20, 1871	Imperial Order in Council, May 16, 1871	359,279	6,976	366,255
Prince Edward Island	July 1, 1873	Imperial Order in Council, June 26, 1873	2,184	--	2,184
Saskatchewan[4]	Sept. 1, 1905	Saskatchewan Act, 1905 (4-5 Edw. VII, c. 42)	220,182	31,518	251,700
Alberta[4]	Sept. 1, 1905	Alberta Act, 1905 (4-5 Edw. VII, c. 3)	248,800	6,485	255,285
Newfoundland	Mar. 31, 1949	The British North America Act, 1949 (12-13 Geo. VI, c. 22)	147,994	7,370	155,364
Northwest Territories[5]	July 15, 1870	Act of Imperial Parliament—Rupert's Land Act, 1868 (31-32 Vict., c. 105), and Imperial Order in Council, June 23, 1870	1,253,438	51,465	1,304,903
Mackenzie[6]	Jan. 1, 1920	Order in Council, Mar. 16, 1918	*493,225*	*34,265*	*527,490*
Keewatin[6]	Jan. 1, 1920		*218,460*	*9,700*	*228,160*
Franklin[6]	Jan. 1, 1920		*541,753*	*7,500*	*549,253*
Yukon Territory[7]	June 13, 1898	Yukon Territory Act, 1898 (61 Vict., c. 6)	205,346	1,730	207,076
		Canada	**3,577,163**	**268,611**	**3,845,774**

[1] The area of Ontario was extended by the Ontario Boundaries Extension Act, 1912 (2 Geo. V, c. 40).

[2] Extended by Quebec Boundaries Extension Act, 1912 (2 Geo. V, c. 45), and diminished Mar. 1, 1927, in consequence of the Award of the Judicial Committee of the British Privy Council, whereby approximately 112,000 sq. miles of territory (formerly considered as part of Quebec) was assigned to Newfoundland.

[3] Extended by the Extension of Boundaries Act of Manitoba, 1881, and the Manitoba Boundaries Extension Act, 1912 (2 Geo. V, c. 32).

[4] Saskatchewan and Alberta created as provinces in 1905 from the area formerly comprised in the provisional Districts of Assiniboia, Athabasca, Alberta and Saskatchewan, established May 17, 1882, by minute of Canadian Privy Council, concurred in by Dominion Parliament and Order in Council, Oct. 2, 1895.

[5] By an Imperial Order in Council passed on June 23, 1870, pursuant to the Rupert's Land Act, 1868 (31-32 Vict., c. 105), the former territories of the Hudson's Bay Company known as Rupert's Land and the North-Western Territory were transferred to Canada, effective July 15, 1870. These territories were designated as the North-West Territories by the Act of 32-33 Vict., c. 3, and as the Northwest Territories by R.S.C. 1906, c. 62. By Imperial Order in Council of July 31, 1880 (effective Sept. 1, 1880), all British territories and possessions in North America not already included within Canada and all islands adjacent thereto (with the exception of the Colony of Newfoundland and its dependencies) were annexed to Canada, and these additional territories were formally included in the North-West Territories by 4-5 Edw. VII, c. 27. The Province of Manitoba was formed out of a portion of the territories by the Manitoba Act, 1870 (33 Vict., c. 3), and a further portion was added to Manitoba in 1881 by 44 Vict., c. 14. The Provinces of Alberta and Saskatchewan were formed out of portions of the territories in 1905, and in 1912 other portions were added to Manitoba, Ontario and Quebec.

[6] By 39 Vict., c. 21, a separate district to be known as the District of Keewatin was established and provision was made for the local government thereof. The Act was expressed to come into force by proclamation. It provided that portions of the District might be re-annexed to the North-West Territories by proclamation; in 1886 a portion of the District of Keewatin was re-annexed, and in 1905 the entire Keewatin District was re-annexed. The Act of 39 Vict. was never proclaimed. By Order in Council of May 8, 1882, the provisional districts of Assiniboia, Saskatchewan, Alberta and Athabasca were created for the convenience of settlers and for postal purposes. By Order in Council of Oct. 2, 1895, the further provisional districts of Ungava, Franklin, Mackenzie and Yukon were created. The boundaries of these provisional districts were re-defined by Order in Council of Dec. 18, 1897. Subsequently the Yukon Territory was formed, the Provinces of Alberta and Saskatchewan were created and other portions of the territories were annexed to Quebec, Ontario and Manitoba. By Order in Council, dated Mar. 16, 1918 (effective Jan. 1, 1920), the remaining portions of the Northwest Territories were divided into three provisional districts known as Mackenzie, Keewatin and Franklin.

[7] The provisional district of Yukon, established in 1895, was created a judicial district of the North-West Territories by proclamation issued pursuant to Sec. 51 of the North-West Territories Act (R.S.C. 1886, c. 50) on Aug. 16, 1897, and by the Yukon Territory Act (61 Vict., c. 6) was declared to be a separate territory.

electoral districts, elections, Royal Style and Titles, and also statutes of provincial legislatures relating to provincial government and provincial legislative assemblies. Other written instruments, such as the Royal Proclamation of 1763, early instructions to Governors, letters patent creating the offices of Governors and Governors General, and Orders in Council passed pursuant to the British North America Act, also form part of the Canadian constitutional system. In addition, the Constitution of Canada includes well-established usages and conventions. The preamble to the British North America Act states that it was the desire of the original provinces to be united "with a constitution similar in principle to that of the United Kingdom" and accordingly many of the usages and conventions of government that have been developed in the United Kingdom over the centuries are followed in Canada. For example, the Cabinet system of responsible government as developed in the United Kingdom obtains in Canada although no mention thereof is made in the British North America Act.

No provision was made in the British North America Act, 1867, for amendment thereof by any legislative authority in Canada, but both the Parliament of Canada and the provincial legislatures were given legislative jurisdiction with respect to some matters relating to government. Thus, for example, the Parliament of Canada was given jurisdiction with respect to the establishment of electoral districts and election laws, and the privileges and immunities of members of the House of Commons and the Senate, and each provincial legislature was empowered to amend the constitution of the province except as regards the office of Lieutenant-Governor. By an amendment to the British North America Act passed in 1949, the authority of the Parliament of Canada to legislate with respect to constitutional matters was considerably enlarged, and it may now amend the Constitution of Canada except as regards the legislative authority of the provinces, the rights and privileges of provincial legislatures or governments, schools, the use of the English or French language, and the duration of the House of Commons.

Canada's Status in the Commonwealth of Nations.*—The several stages in the development of the status of Canada have been authoritatively described in the reports of successive Imperial Conferences, including that held at London in 1926 which defined the group of self-governing communities consisting of the United Kingdom and the Dominions as "autonomous communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or external affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations". That Conference also recognized that, as a consequence of this equality of status, the Governor General of a Dominion "is the representative of the Crown, holding in all essential respects the same position in relation to the administration of public affairs in the Dominion as is held by His Majesty the King in Great Britain", and that "it is the right of the Government of each Dominion to advise the Crown in all matters relating to its own affairs". Simultaneously, with this change in the constitutional relationship between the several parts of the British Commonwealth of Nations, there developed, as a complementary aspect of nationhood, the assumption by the several Dominions of further responsibilities and rights of sovereign States in their relations with other members of the community of nations. Membership in the League of Nations and, more recently, in the United Nations, the exercise of treaty-making powers and the establishment of separate diplomatic representation in a number of foreign countries have characterized this phase in the growth of Canada. More explicit recognition of the implications of the principles of equality of status was accorded in the Statute of Westminster of 1931, which provided for the removal of the remaining limitations on the legislative autonomy of the Commonwealth nations.

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* Dealt with in greater detail in the 1952-53 Year Book, pp. 101-104.

Thus Canada, under the Crown, has equality of status with the United Kingdom and the other Commonwealth nations in both domestic and foreign affairs; its government advises the Crown in the person of the Governor General on all matters relating to Canada. Canada has membership in the United Nations; makes its own treaties; appoints its own ambassadors and other representatives abroad; levies its own taxes; makes its own laws which are executed by a government dependent on the will of a majority of the people; and maintains its own military, naval and air forces. In short, Canada has achieved the full status of democratic nationhood within the Commonwealth of Nations.

PART II.—MACHINERY OF GOVERNMENT

Section 1.—The Federal Government

Subsection 1.—The Executive

The Crown.—The British North America Act provides that "the Executive Government and authority of and over Canada is . . . vested in the Queen". The functions of the Crown, which are substantially the same as those of the Queen in relation to the Government of the United Kingdom, are discharged by the Governor General in accordance with established principles of responsible government. The practical executive functions of government are exercised by the Cabinet.

Apart from her constitutional position in relation to the various governments of the Commonwealth countries, the Queen is Head of the Commonwealth and symbolizes the association of the member countries. Until 1953, the title of the Queen was the same throughout the Commonwealth. Constitutional developments put the title somewhat out of accord with the facts of the position and, in December 1952, it was decided by the Prime Ministers of the Commonwealth countries meeting at London to establish new forms of title for each country. The title for Canada was approved by Parliament and established by a Royal Proclamation on May 29, 1953. The title of the Queen, so far as Canada is concerned, now is:—

> "Elizabeth the Second, by the grace of God of the United Kingdom, Canada and her other realms and territories Queen, Head of the Commonwealth, Defender of the Faith".

The Governor General.—The Governor General, appointed by the Queen on the advice of the Prime Minister of Canada, traditionally serves for a term of five years. He exercises the executive authority of the Queen in relation to the Government of Canada, under the Letters Patent constituting the Office of Governor General and the provisions of the British North America Acts, 1867 to 1952. Acting under the recommendations of his responsible advisers, he summons, prorogues and dissolves Parliament and assents to Bills and exercises other executive functions.

2.—Governors General of Canada since Confederation

Name	Date of Appointment	Date of Assumption of Office
Viscount Monck, G.C.M.G.	June 1, 1867	July 1, 1867
Lord Lisgar, G.C.M.G.	Dec. 29, 1868	Feb. 2, 1869
The Earl of Dufferin, K.P., K.C.B., G.C.M.G.	May 22, 1872	June 25, 1872
The Marquis of Lorne, K.T., G.C.M.G.	Oct. 5, 1878	Nov. 25, 1878
The Marquis of Lansdowne, G.C.M.G.	Aug. 18, 1883	Oct. 23, 1883
Lord Stanley of Preston, G.C.B.	May 1, 1888	June 11, 1888
The Earl of Aberdeen, K.T., G.C.M.G.	May 22, 1893	Sept. 18, 1893
The Earl of Minto, G.C.M.G.	July 30, 1898	Nov. 12, 1898
Earl Grey, G.C.M.G.	Sept. 26, 1904	Dec. 10, 1904
Field Marshal H.R.H. The Duke of Connaught, K.G.	Mar. 21, 1911	Oct. 13, 1911
The Duke of Devonshire, K.G., G.C.M.G., G.C.V.O.	Aug. 19, 1916	Nov. 11, 1916
General The Lord Byng of Vimy, G.C.B., G.C.M.G., M.V.O.	Aug. 2, 1921	Aug. 11, 1921
Viscount Willingdon of Ratton, G.C.S.I., G.C.I.E., G.B.E.	Aug. 5, 1926	Oct. 2, 1926
The Earl of Bessborough, G.C.M.G.	Feb. 9, 1931	Apr. 4, 1931
Lord Tweedsmuir of Elsfield, G.C.M.G., G.C.V.O., C.H.	Aug. 10, 1935	Nov. 2, 1935
Major-General The Earl of Athlone, K.G., P.C., G.C.B., G.C.M.G., G.C.V.O., D.S.O.	Apr. 3, 1940	June 21, 1940
Field Marshal Viscount Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C., A.D.C.	Aug. 1, 1945	Apr. 12, 1946
The Right Honourable Vincent Massey, C.H.	Jan. 24, 1952	Feb. 28, 1952

The Cabinet.—The Cabinet is a committee of the Queen's Privy Council for Canada and is responsible to Parliament. By convention, the members of the Cabinet are members of either the House of Commons or the Senate. Normally, most of the Cabinet members have seats in the House of Commons; at July 15, 1954, the Leader of the Government in the Senate (who was also Solicitor General) and the newly appointed Transport Minister were the only members not in the House of Commons.

The Cabinet initiates nearly all public Bills placed before Parliament and, following established precedent, resigns office when it becomes evident that it no longer holds the confidence of the representatives of the people. Its members are chosen by the Prime Minister and each generally assumes charge of one of the various departments of government, although a Minister may hold more than one portfolio at the same time, or may be without portfolio.

3.—Prime Ministers since Confederation

Ministry	Prime Minister	Length of Administration
1	Rt. Hon. Sir John Alexander Macdonald	July 1, 1867 – Nov. 5, 1873
2	Hon. Alexander Mackenzie	Nov. 7, 1873 – Oct. 16, 1878
3	Rt. Hon. Sir John Alexander Macdonald	Oct. 17, 1878 – June 6, 1891
4	Hon. Sir John Joseph Caldwell Abbott	June 16, 1891 – Nov. 24, 1892
5	Rt. Hon. Sir John Sparrow David Thompson	Dec. 5, 1892 – Dec. 12, 1894
6	Hon. Sir Mackenzie Bowell	Dec. 21, 1894 – Apr. 27, 1896
7	Hon. Sir Charles Tupper	May 1, 1896 – July 8, 1896
8	Rt. Hon. Sir Wilfrid Laurier	July 11, 1896 – Oct. 6, 1911
9	Rt. Hon. Sir Robert Laird Borden	Oct. 10, 1911 – Oct. 12, 1917 (Conservative Administration)
10	Rt. Hon. Sir Robert Laird Borden	Oct. 12, 1917 – July 10, 1920 (Unionist Administration)
11	Rt. Hon. Arthur Meighen	July 10, 1920 – Dec. 29, 1921 (Unionist—"National Liberal and Conservative Party")
12	Rt. Hon. William Lyon Mackenzie King	Dec. 29, 1921 – June 28, 1926
13	Rt. Hon. Arthur Meighen	June 29, 1926 – Sept. 25, 1926
14	Rt. Hon. William Lyon Mackenzie King	Sept. 25, 1926 – Aug. 6, 1930
15	Rt. Hon. Richard Bedford Bennett	Aug. 7, 1930 – Oct. 23, 1935
16	Rt. Hon. William Lyon Mackenzie King	Oct. 23, 1935 – Nov. 15, 1948
17	Rt. Hon. Louis Stephen St. Laurent	Nov. 15, 1948 – ...

4.—Members of the Seventeenth Ministry, as at July 15, 1954

(According to precedence of Ministers)

NOTE.—A complete list of the members of Federal Ministries from Confederation to 1913 appears in the 1912 Year Book, pp. 422-429. Later Ministries will be found in subsequent editions of the Year Book.

Office	Occupant	Date of First Appointment[1]	Date of Appointment to Present Portfolio
Prime Minister and President of the Queen's Privy Council for Canada.	Rt. Hon. LOUIS STEPHEN ST. LAURENT	Dec. 10, 1941	Nov. 15, 1948
Minister of Trade and Commerce and Minister of Defence Production	Rt. Hon. C. D. HOWE	Oct. 23, 1935	Jan. 19, 1948 Mar. 22, 1951
Minister of Agriculture	Rt. Hon. J. G. GARDINER	Oct. 28, 1935	Oct. 28, 1935
Minister of National Health and Welfare	Hon. PAUL MARTIN	Apr. 18, 1945	Dec. 12, 1946
Minister of National Revenue	Hon. J. J. McCANN	Apr. 18, 1945	Apr. 18, 1945
Minister of Labour	Hon. M. F. GREGG	Jan. 19, 1948	Aug. 7, 1950
Secretary of State for External Affairs	Hon. L. B. PEARSON	Sept. 10, 1948	Sept. 10, 1948
Minister of Justice and Attorney General	Hon. S. S. GARSON	Nov. 15, 1948	Nov. 15, 1948
Minister of Public Works	Hon. ROBERT H. WINTERS	Nov. 15, 1948	Sept. 17, 1953
Minister of Veterans Affairs	Hon. HUGUES LAPOINTE	Aug. 24, 1949	Aug. 7, 1950
Minister of Finance and Receiver General	Hon. W. E. HARRIS	Jan. 18, 1950	July 1, 1954
Minister of Mines and Technical Surveys	Hon. GEORGE PRUDHAM	Dec. 13, 1950	Dec. 13, 1950
Postmaster General	Hon. ALCIDE CÔTÉ	Feb. 13, 1952	Feb. 13, 1952
Minister of Fisheries	Hon. JAMES SINCLAIR	Oct. 15, 1952	Sept. 17, 1953
Minister of National Defence	Hon. RALPH O. CAMPNEY	Oct. 15, 1952	July 1, 1954
Leader of the Government in the Senate and Solicitor General	Hon. WILLIAM R. MACDONALD	May 12, 1953	May 12, 1953 Jan. 12, 1954
Minister of Citizenship and Immigration	Hon. JOHN W. PICKERSGILL	June 12, 1953	July 1, 1954
Minister of Northern Affairs and National Resources	Hon. JEAN LESAGE	Sept. 17, 1953	Sept. 17, 1953
Minister of Transport	Hon. GEORGE C. MARLER	July 1, 1954	July 1, 1954
Secretary of State of Canada	Hon. ROCH PINARD	July 1, 1954	July 1, 1954

[1] Appointee was not necessarily sworn in on date given.

Administrative duties in the various departments of government became so burdensome during World War II that Parliamentary Assistants were appointed to assist six Cabinet Ministers with their parliamentary duties. The practice was extended after the War and at July 15, 1954, there were 11 Parliamentary Assistants, as follows:—

To Prime Minister	W. S. WEIR
To Minister of Agriculture	ROBERT McCUBBIN
To Minister of Fisheries	J. WATSON MACNAUGHT
To Minister of Veterans Affairs	C. E. BENNETT
To Minister of National Defence	J. A. BLANCHETTE
To Minister of Transport	L. LANGLOIS
To Postmaster General	T. A. M. KIRK
To Minister of Finance	W. M. BENIDICKSON
To Minister of National Health and Welfare	F. G. ROBERTSON
To Minister of Defence Production	JOHN H. DICKEY
To Minister of Public Works	M. BOURGET

The Privy Council.—The Queen's Privy Council for Canada is composed of about seventy members who are sworn of the Council by the Governor General, on the advice of the Prime Minister, and who retain their membership for life. The Council consists, chiefly, of present and former Ministers of the Crown. It does not meet as a functioning body and its constitutional responsibilities as adviser to the Crown in respect to Canada are performed exclusively by the Ministers who constitute the Cabinet of the day.

5.—Members of the Queen's Privy Council for Canada, According to Seniority Therein, as at July 15, 1954

NOTE.—In this list the prefix "The Rt. Hon." indicates membership in the United Kingdom Privy Council. Clerk of the Privy Council and Secretary to the Cabinet, R. B. BRYCE; Assistant Clerk of the Privy Council, A. M. HILL.

Member[1]	Date When Sworn In
The Rt. Hon. Sir THOMAS WHITE	Oct. 10, 1911
The Rt. Hon. ARTHUR MEIGHEN	Oct. 2, 1915
The Hon. ESIOFF LEON PATENAUDE	Oct. 6, 1915
The Hon. ALBERT SEVIGNY	Jan. 8, 1917
The Hon. JAMES ALEXANDER CALDER	Oct. 12, 1917
The Hon. SYDNEY CHILTON MEWBURN	Oct. 12, 1917
The Hon. THOMAS ALEXANDER CRERAR	Oct. 12, 1917
The Hon. HENRY HERBERT STEVENS	Sept. 21, 1921
The Hon. JAMES HORACE KING	Feb. 3, 1922
The Hon. EDWARD JAMES MCMURRAY	Nov. 14, 1923
The Rt. Hon. CHARLES VINCENT MASSEY	Sept. 16, 1925
The Hon. CHARLES AVERY DUNNING	Mar. 1, 1926
The Hon. WILLIAM DAUM EULER	Sept. 25, 1926
H.R.H. THE DUKE OF WINDSOR	Aug. 2, 1927
The Hon. ARTHUR CHARLES HARDY	July 31, 1930
The Hon. HUGH ALEXANDER STEWART	Aug. 7, 1930
The Hon. DONALD MATHESON SUTHERLAND	Aug. 7, 1930
The Hon. THOMAS GEROW MURPHY	Aug. 7, 1930
The Hon. WILLIAM DUNCAN HERRIDGE	June 17, 1931
The Hon. SAMUEL GOBEIL	Aug. 14, 1935
The Hon. LUCIEN HENRI GENDRON	Aug. 30, 1935
The Hon. WILLIAM EARL ROWE	Aug. 30, 1935
The Hon. ONESIME GAGNON	Aug. 30, 1935
The Hon. CHARLES GAVAN POWER	Oct. 23, 1935
The Rt. Hon. JAMES LORIMER ILSLEY	Oct. 23, 1935
The Hon. JOSEPH ENOIL MICHAUD	Oct. 23, 1935
The Rt. Hon. CLARENCE DECATUR HOWE[2]	Oct. 23, 1935
The Rt. Hon. JAMES GARFIELD GARDINER[2]	Nov. 4, 1935
The Hon. JAMES ANGUS MACKINNON	Jan. 23, 1939
The Hon. WILLIAM PATE MULOCK	July 8, 1940
The Hon. COLIN WILLIAM GEORGE GIBSON	July 8, 1940
The Hon. JOSEPH THORARINN THORSON	June 11, 1941
The Hon. WILLIAM FERDINAND ALPHONSE TURGEON	Oct. 8, 1941
The Rt. Hon. LOUIS STEPHEN ST. LAURENT[3]	Dec. 10, 1941
The Rt. Hon. Sir WINSTON LEONARD SPENCER CHURCHILL	Dec. 29, 1941
The Hon. ALPHONSE FOURNIER	Oct. 7, 1942
The Hon. ERNEST BERTRAND	Oct. 7, 1942
The Hon. LEO RICHER LAFLÈCHE	Oct. 7, 1942
The Hon. BROOKE CLAXTON	Oct. 13, 1944
The Hon. ANDREW GEORGE LATTA MCNAUGHTON	Nov. 2, 1944
The Hon. JOSEPH ARTHUR JEAN	Apr. 18, 1945
The Hon. LIONEL CHEVRIER	Apr. 18, 1945
The Hon. PAUL JOSEPH JAMES MARTIN[2]	Apr. 18, 1945
The Hon. DOUGLAS CHARLES ABBOTT	Apr. 18, 1945
The Hon. JAMES JOSEPH MCCANN[2]	Apr. 18, 1945
The Hon. DAVID LAURENCE MACLAREN	Apr. 18, 1945
The Hon. THOMAS VIEN	July 19, 1945
The Hon. WISHART MCLEA ROBERTSON	Sept. 4, 1945
The Hon. MILTON FOWLER GREGG[2]	Sept. 2, 1947
The Hon. ROBERT WELLINGTON MAYHEW	June 11, 1948
The Hon. LESTER BOWLES PEARSON[2]	Sept. 10, 1948
The Hon. STUART SINCLAIR GARSON[2]	Nov. 15, 1948
The Hon. ROBERT HENRY WINTERS[2]	Nov. 15, 1948
The Hon. FREDERICK GORDON BRADLEY	Apr. 1, 1949
The Hon. CHARLES JOST BURCHELL	Apr. 1, 1949
The Hon. GASPARD FAUTEUX	May 16, 1949
The Hon. HUGUES LAPOINTE[2]	Aug. 25, 1949
The Hon. GABRIEL EDOUARD RINFRET	Aug. 25, 1949
The Hon. WALTER EDWARD HARRIS[2]	Jan. 18, 1950
The Hon. GEORGE PRUDHAM[2]	Dec. 13, 1950
The Hon. GEORGE BLACK	Aug. 3, 1951
VISCOUNT ALEXANDER OF TUNIS	Jan. 29, 1952
The Hon. ALCIDE CÔTÉ[2]	Feb. 13, 1952
The Hon. JAMES SINCLAIR[2]	Oct. 15, 1952
The Hon. RALPH OSBORNE CAMPNEY[2]	Oct. 15, 1952
The Hon. ELIE BEAUREGARD	May 12, 1953
The Hon. WILLIAM ROSS MACDONALD[2]	May 12, 1953
The Hon. GEORGE ALEXANDER DREW	May 12, 1953
The Hon. JOHN WHITNEY PICKERSGILL[2]	June 12, 1953
The Rt. Hon. THIBAUDEAU RINFRET	Sept. 16, 1953
The Hon. JEAN LESAGE[2]	Sept. 17, 1953
The Hon. PATRICK KERWIN	July 1, 1954
The Hon. GEORGE CARLYLE MARLER[2]	July 1, 1954
The Hon. ROCH PINARD[2]	July 1, 1954

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[1] Members of Her Majesty's Privy Council for Canada take rank *inter se* according to the dates of their being sworn in. [2] Ranks as a member of the Cabinet. [3] Ranks as the Prime Minister of Canada.

6.—Duration and Sessions of Parliaments, 1936-54

NOTE.—Similar information for the 1st to the 12th Parliaments, covering the period from Confederation to 1917 is given in the 1940 Year Book, p. 46, and that for the 13th to 17th Parliaments in the 1945 edition, p. 53.

Order of Parliament	Session	Date of Opening	Date of Prorogation	Days of Session	Sitting Days of House of Commons	Date of Election, Writs Returnable, Dissolution, and Length of Parliament[1, 2]
18th Parliament.	1st	Feb. 6, 1936	June 23, 1936	139	91	Oct. 14, 1935[3] Nov. 9, 1935[4] Jan. 25, 1940[5] 4 y., 2 m., 16 d.
	2nd	Jan. 14, 1937	Apr. 10, 1937	87	62	
	3rd	Jan. 27, 1938	July 1, 1938	156	102	
	4th	Jan. 12, 1939	June 3, 1939	143	103	
	5th	Sept. 7, 1939	Sept. 13, 1939	7	6	
	6th	Jan. 25, 1940	Jan. 25, 1940	1	1	
19th Parliament[6].	1st	May 16, 1940	Nov. 5, 1940	174	61	Mar. 26, 1940[3] Apr. 17, 1940[4] Apr. 16, 1945[5] 5 y.
	2nd	Nov. 7, 1940	Jan. 21, 1942	441	105	
	3rd	Jan. 22, 1942	Jan. 27, 1943	371	124	
	4th	Jan. 28, 1943	Jan. 26, 1944	364	120	
	5th	Jan. 27, 1944	Jan. 31, 1945	371	136	
	6th	Mar. 19, 1945	Apr. 16, 1945	29	19	
20th Parliament..	1st	Sept. 6, 1945	Dec. 18, 1945	104	76	June 11, 1945[3] Aug. 9, 1945[4] Apr. 30, 1949[5] 3 y., 8 m., 22 d.
	2nd	Mar. 14, 1946	Aug. 31, 1946	171	118	
	3rd	Jan. 30, 1947	July 17, 1947	169	115	
	4th	Dec. 5, 1947	June 30, 1948	209	119	
	5th	Jan. 26, 1949	Apr. 30, 1949	95	59	
21st Parliament.	1st	Sept. 15, 1949	Dec. 10, 1949	87	64	June 27, 1949[3] Aug. 25, 1949[4] June 13, 1953[5] 3 y., 9 m., 20 d.
	2nd	Feb. 16, 1950	June 30, 1950	135	90	
	3rd	Aug. 29, 1950	Jan. 29, 1951	154	17	
	4th	Jan. 30, 1951	Oct. 9, 1951	253	105	
	5th	Oct. 9, 1951	Dec. 29, 1951	82	56	
	6th	Feb. 28, 1952	Nov. 20, 1952	267	87	
	7th	Nov. 20, 1952	May 15, 1953	176	108	
22nd Parliament.	1st	Nov. 12, 1953	June 26, 1954	226	139	Aug. 10, 1953[3] Oct. 8, 1953[4]

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[1] The ordinary legal limit of duration for each Parliament is five years.

[2] Duration of Parliament in years, months and days. The life of a Parliament is counted from the date of return of election writs to the date of dissolution, both days inclusive (B.N.A. Act, Sect. 50).

[3] Date of general election.

[4] Writs returnable.

[5] Dissolution of Parliament.

[6] During the war years Parliament was kept in almost continuous session. When prorogation took place it was followed immediately by a new session. During long adjournments provision was made whereby the Speaker could reconvene Parliament before the date previously set for reassembly.

Subsection 2.—The Legislature

The federal legislative authority is vested in the Parliament of Canada, consisting of the Queen, an Upper House styled the Senate, and the House of Commons. Bills may originate in either the Senate or the House subject to the provisions of Sect. 53 of the British North America Act, 1867, which provides that Bills for the appropriation of any part of the public revenue or the imposition of any tax or impost shall originate in the House of Commons. Bills must pass both Houses and receive Royal Assent before becoming law. In practice, most Public Bills originate in the House of Commons, although there has been a marked increase recently in the introduction of Public Bills in the Senate. Private Bills usually originate in the Senate. (*See* Chap. XXIX for current legislation.)

Under Sect. 91 of the British North America Acts, 1867-1952, the legislative authority of the Parliament of Canada extends to the following matters: the amendment of the Constitution of Canada subject to certain exceptions; the public debt and property; the regulation of trade and commerce; unemployment insurance;

the raising of money by any mode or system of taxation; the borrowing of money on the public credit; postal service; the Census and statistics; militia, military and naval service, and defence; the fixing of and providing for the salaries and allowances of civil and other officers of the Government of Canada; beacons, buoys, lighthouses, and Sable Island; navigation and shipping; quarantine and the establishment and maintenance of marine hospitals; sea coast and inland fisheries; ferries between a province and any British or foreign country or between two provinces; currency and coinage, banking, incorporation of banks, and the issue of paper money; savings banks; weights and measures; bills of exchange and promissory notes; interest; legal tender; bankruptcy and insolvency; patents of invention and discovery; copyrights; Indians and lands reserved for the Indians; naturalization and aliens; marriage and divorce; the criminal law, except the constitution of courts of criminal jurisdiction, but including the procedure in criminal matters; the establishment, maintenance and management of penitentiaries; such classes of subjects as are expressly excepted in the enumeration of the classes of subjects by this Act assigned exclusively to the legislatures of the provinces.

In addition, under Sect. 95, the Parliament of Canada may make laws in relation to agriculture and immigration concurrently with provincial legislatures, although federal legislation is paramount in the event of conflict. By the British North America Act, 1951 (14-15 Geo. VI, c. 32), it was declared that the Parliament of Canada might make laws in relation to old age pensions in Canada, but no such law shall affect the operation of any provincial laws in relation to old age pensions.

The Senate.—From an original membership of 72 at Confederation, the Senate, through the addition of new provinces and the general growth of population, now has 102 members, the latest change in representation having been made on the admission of Newfoundland to Confederation in 1949. The growth of representation in the Senate is traced in the 1940 Year Book, pp. 47-49, and is summarized by provinces in Table 7.

7.—Representation in the Senate since Confederation

Province	1867	1870	1871	1873	1882	1887	1892	1903	1905	1915-1948	1949-1954
Ontario	24	24	24	24	24	24	24	24	24	24	24
Quebec	24	24	24	24	24	24	24	24	24	24	24
Atlantic Provinces	24	24	24	24	24	24	24	24	24	24	30
Nova Scotia	*12*	*12*	*12*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*
New Brunswick	*12*	*12*	*12*	*10*	*10*	*10*	*10*	*10*	*10*	*10*	*10*
Prince Edward Island	...	...	...	*4*	*4*	*4*	*4*	*4*	*4*	*4*	*4*
Newfoundland	...	...	...	...	...	...	...	...	...	...	*6*
Western Provinces	...	2	5	5	6	8	9	11	15	24	24
Manitoba	...	*2*	*2*	*2*	*3*	*3*	*4*	*4*	*4*	*6*	*6*
British Columbia	...	...	*3*	*3*	*3*	*3*	*3*	*3*	*3*	*6*	*6*
Saskatchewan	...	...	...	...	...	*2*	*2*	*4*	*4*	*6*	*6*
Alberta									*4*	*6*	*6*
Totals	**72**	**74**	**77**	**77**	**78**	**80**	**81**	**83**	**87**	**96**	**102**

8.—Members of the Senate, by Province, as at July 15, 1954

Speaker	The Hon. Wishart McLea Robertson
Clerk of the Senate and Clerk of Parliaments	Leslie Clare Moyer
Leader of the Government	The Hon. William Ross Macdonald
Leader of the Opposition	The Hon. John Thomas Haig

(Ranked according to seniority, by province. All Senators are entitled to the designation "The Honourable".)

Province and Name of Senator	P.O. Address
Newfoundland—	
(5 Senators—1 vacancy)	
Baird, Alexander Boyd	St. John's
Petten, Ray	St. John's
Pratt, Calvert C	St. John's
Basha, Michael G	Curling
Bradley, Frederick G	Bonavista
Prince Edward Island—	
(3 Senators—1 vacancy)	
McIntyre, James Peter	Mount Stewart
Grant, Thomas Vincent, M.D	Montague
Barbour, George H	Charlottetown
Nova Scotia—	
(7 Senators—3 vacancies)	
Quinn, Felix Patrick	Bedford
Robertson, Wishart McLea	Truro
Kinley, John James	Lunenburg
McDonald, John Alexander	Halifax
Comeau, Joseph Willie	Comeauville
Isnor, Gordon B	Halifax
Hawkins, Charles G	Milford Station
New Brunswick—	
(6 Senators—4 vacancies)	
Veniot, Clarence Joseph	Bathurst
McLean, Alexander Neil	Saint John
Pirie, Frederick William	Grand Falls
Burchill, George Percival	South Nelson
Fergusson, Muriel McQueen	Fredericton
Leger, Aurel D	Grande Digue
Quebec—	
(19 Senators—5 vacancies)	
Raymond, Donat	Montreal
Hugessen, Adrian Knatchbull	Montreal
Fafard, J. Fernand	L'Islet
Howard, Charles Benjamin	Sherbrooke
Beauregard, Elie	Montreal
Gouin, Léon Mercier	Montreal
Vien, Thomas	Outremont
DuTremblay, Pamphile Réal	Montreal
Bouchard, Télésphore Damien	St. Hyacinthe
Daigle, Armand	Montreal
Vaillancourt, Cyrille	Lévis
Nicol, Jacob	Sherbrooke
Dupuis, Vincent	Longueuil
Dessureault, Jean Marie	Quebec
Bouffard, Paul Henri	Quebec
Godbout, Joseph Adelard	Frelighsburg
Jodoin, Mariana Beauchamp	Montreal
Tremblay, Leonard D. S	St. Malachi
Fournier, Sarto	Montreal
Ontario—	
(22 Senators—2 vacancies)	
Hardy, Arthur Charles	Brockville
McGuire, William Henry	Toronto
Wilson, Cairine Reay	Ottawa
Fallis, Iva Campbell	Peterborough
Lambert, Norman Platt	Ottawa
Hayden, Salter Adrian	Toronto
Paterson, Norman McLeod	Fort William
Duffus, Joseph James	Peterborough
Euler, William Daum	Kitchener
Davies, William Rupert	Toronto
Campbell, Gordon Peter	Toronto
Taylor, William Horace	Brantford
Bishop, Charles Lawrence	Ottawa
Roebuck, Arthur Wentworth	Toronto
Hurtubise, Joseph Raoul	Sudbury
Farquhar, Thomas	Little Current
Fraser, William Alexander	Trenton
Golding, William Henry	Seaforth
Woodrow, Allan L	Toronto
Bradette, James A	Cochrane
Connolly, John J	Ottawa
Macdonald, William Ross	Brantford
Manitoba—	
(4 Senators—2 vacancies)	
Haig, John Thomas	Winnipeg
Beaubien, Arthur Lucien	St. Jean Baptiste
Crerar, Thomas Alexander	Winnipeg
Howden, John Power	Norwood Grove
Saskatchewan—	
(6 Senators)	
Calder, James Alexander	Regina
Marcotte, Arthur	Ponteix
Horner, Ralph Byron	Blaine Lake
Aseltine, Walter Morley	Rosetown
Stevenson, John James	Prince Albert
Wood, Thomas H	Regina
Alberta—	
(5 Senators—1 vacancy)	
Blais, Aristide	Edmonton
Gershaw, Fred William	Medicine Hat
Ross, George Henry	Calgary
MacKinnon, James Angus	Edmonton
Stambaugh, J. Wesley	Bruce
British Columbia—	
(6 Senators)	
King, James Horace	Vancouver
Farris, John Wallace de Beque	Vancouver
Turgeon, James Gray	Vancouver
McKeen, Stanley Stewart	Vancouver
Reid, Thomas	New Westminster
Hodges, Nancy	Victoria

The House of Commons.—The British North America Act, 1867, provided that, in respect of representation in the House of Commons, the Province of Quebec should have the fixed number of sixty-five members and that there should be assigned to each of the other provinces such a number of members as would bear the same proportion to the number of its population as the number sixty-five bears to the number of the population of Quebec. This Act also provided that, on the completion of a census of 1871 and of each subsequent decennial census, the representation of the several provinces should be readjusted from time to time provided the proportionate representation of the provinces as prescribed by the Act was not thereby disturbed.

In the session of 1946 the House of Commons adopted a resolution stating that the effect of the provisions of the British North America Act relating to representation had not been satisfactory in that proportionate representation of the provinces according to population had not been maintained and that a more equitable apportionment of members to the various provinces could be effected if readjustments were made on the basis of the population of all the provinces taken as a whole. Accordingly, the Act was amended in 1946 to provide a new rule to regulate representation in the House of Commons. Generally speaking, representation was fixed as follows:—

> The membership assigned to each province shall be computed by dividing the total population of the provinces by two hundred and fifty-four and by dividing the population of each province by the quotient so obtained.

This rule, employed in the redistribution of representation made in 1947, was effective in the general election of 1949.

After the completion of the 1951 Census, it was apparent that, as a result of a wartime shift of population, a substantial reduction in the representation of the Province of Saskatchewan would ensue under the rules then regulating representation. Accordingly, in an effort to eliminate sharp reductions in provincial representation from one census to another, the British North America Act was again amended to provide representation on the following basis:—

> "Sect. 51.—(1) Subject as hereinafter provided, the number of members of the House of Commons shall be two hundred and sixty-three and the representation of the provinces therein shall forthwith upon the coming into force of this section and thereafter on the completion of each decennial census be readjusted by such authority, in such manner, and from such time as the Parliament of Canada from time to time provides, subject and according to the following rules:—
>
> "1. There shall be assigned to each of the provinces a number of members computed by dividing the total population of the provinces by two hundred and sixty-one and by dividing the population of each province by the quotient so obtained, disregarding, except as hereinafter in this section provided, the remainder, if any, after the said process of division.
>
> "2. If the total number of members assigned to all the provinces pursuant to rule one is less than two hundred and sixty-one, additional members shall be assigned to the provinces (one to a province) having remainders in the computation under rule one commencing with the province having the largest remainder and continuing with the other provinces in the order of the magnitude of their respective remainders until the total number of members assigned is two hundred and sixty-one.
>
> "3. Notwithstanding anything in this section, if upon completion of a computation under rules one and two, the number of members to be assigned to a province is less than the number of senators representing the said province, rules one and two shall cease to apply in respect of the said province, and there shall be assigned to the said province a number of members equal to the said number of senators.

> "4. In the event that rules one and two cease to apply in respect of a province then, for the purpose of computing the number of members to be assigned to the provinces in respect of which rules one and two continue to apply, the total population of the provinces shall be reduced by the number of the population of the province in respect of which rules one and two have ceased to apply and the number two hundred and sixty-one shall be reduced by the number of members assigned to such province pursuant to rule three.
>
> "5. On any such readjustment the number of members for any province shall not be reduced by more than fifteen per cent below the representation to which such province was entitled under rules one to four of this subsection at the last preceding readjustment of the representation of that province, and there shall be no reduction in the representation of any province as a result of which that province would have a smaller number of members than any other province that according to the results of the then last decennial census did not have a larger population; but for the purposes of any subsequent readjustment of representation under this section any increase in the number of members of the House of Commons resulting from the application of this rule shall not be included in the divisor mentioned in rules one to four of this subsection.
>
> "6. Such readjustment shall not take effect until the termination of the then existing Parliament.
>
> "(2) The Yukon Territory as constituted by chapter forty-one of the Statutes of Canada, 1901, shall be entitled to one member, and such other part of Canada not comprised within a province as may from time to time be defined by the Parliament of Canada shall be entitled to one member." (R.S.C. 1952, c. 304.)

The principal effect of these new rules is that the representation of any province shall not be reduced by more than 15 p.c. at any one readjustment, subject however to the qualification that the rule shall not work out in such manner that the representation of a province with a smaller population shall be greater than any province with a larger population.

Subsequently, Parliament enacted a measure, "An Act to readjust the Representation in the House of Commons, 1952" (I Eliz. II, c. 48), effective in the general election of 1953, which provided that representation in the House of Commons shall be on the following basis:—

> "Sect. 2.—Eighty-five members of the House of Commons shall be elected for the Province of Ontario, seventy-five for the Province of Quebec, twelve for the Province of Nova Scotia, ten for the Province of New Brunswick, fourteen for the Province of Manitoba, twenty-two for the Province of British Columbia, four for the Province of Prince Edward Island, seventeen for the Province of Saskatchewan, seventeen for the Province of Alberta, seven for the Province of Newfoundland, one for the Yukon Territory and one for Mackenzie district of the Northwest Territories, thus making a total of two hundred and sixty-five members."

The number of representatives of each province elected at each of the 22 general elections since Confederation is given in Table 9.

9.—Representation in the House of Commons as at Federal General Elections, 1867-1953

Province or Territory	1867	1872	1874 1878	1882	1887 1891	1896 1900	1904	1908 1911	1917 1921	1925 1926 1930	1935 1940 1945	1949	1953
Ontario..........	82	88	88	92	92	92	86	86	82	82	82	83	85
Quebec..........	65	65	65	65	65	65	65	65	65	65	65	73	75
Nova Scotia.....	19	21	21	21	21	20	18	18	16	14	12	13	12
New Brunswick..	15	16	16	16	16	14	13	13	11	11	10	10	10
Manitoba........	...	4	4	5	5	7	10	10	15	17	17	16	14
British Columbia	...	6	6	6	6	6	7	7	13	14	16	18	22
P. E. Island.....	...	...	6	6	6	5	4	4	4	4	4	4	4
Saskatchewan.. .	...	...	...	...	4	4	10	10	16	21	21	20	17
Alberta..........	...	...	...	...				7	12	16	17	17	17
Yukon...........	...	...	...	...	...	...	1	1	1	1	1	1	1
Mackenzie River.													1
Newfoundland...	...	...	...	...	...	...	...	...	...	...	...	7	7
Totals.......	**181**	**200**	**206**	**211**	**215**	**213**	**214**	**221**	**235**	**245**	**245**	**262**	**265**

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to July 15, 1954.

Speaker.................................. The Hon. L. René Beaudoin
Clerk of the House of Commons......... Leon J. Raymond
Leader of the Opposition................. The Hon. George A. Drew

Note.—The vote is summarized by provinces in Table 12, p. 70. The leaders of the political parties are indicated by asterisks (*). For Parliamentary Assistants, *see* p. 56. This information, except the population of constituencies, has been supplied by the Chief Electoral Officer, Ottawa. Party affiliations are unofficial: Lib.=Liberal; P.C.=Progressive Conservative; C.C.F.=Co-operative Commonwealth Federation; S.C.=Social Credit; L.-Lab.=Liberal-Labour; Ind.=Independent.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Newfoundland— (7 members)							
Bonavista-Twillingate	45,319	24,274	12,738	10,072	Hon. J. W. Pickersgill	Ottawa, Ont.	Lib.
Burin-Burgeo	43,043	21,412	12,593	11,017	C. W. Carter	St. John's	Lib.
Grand Falls - White Bay - Labrador	59,128	33,879	18,889	13,653	T. G. W. Ashbourne	Twillingate	Lib.
Humber-St. George's	52,142	27,357	16,297	12,526	H. Batten	Corner Brook	Lib.
St. John's East	55,116	29,961	19,757	8,310	A. MacPherson Fraser	St. John's	Lib.
St. John's West	56,338	30,784	19,177	9,965	J. A. Power	St. John's	Lib.
Trinity-Conception	50,330	27,048	12,317	8,814	L. T. Stick	Bay Roberts	Lib.
P. E. Island— (4 members)							
Kings	17,943	10,514	9,175	4,750	T. J. Kickham	Souris	Lib.
Prince	37,735	19,670	16,879	8,782	J. W. MacNaught	Summerville	Lib.
Queens	42,751	25,285	40,508	10,351 10,086	N. A. Matheson J. A. MacLean	Charlottetown Beaton's Mills	Lib. P.C.
Nova Scotia— (12 members)							
Antigonish-Guysborough	26,216	15,164	10,330	6,884	J. R. Kirk	Antigonish	Lib.
Cape Breton North and Victoria	42,337	23,593	15,861	9,535	W. M. Buchanan	North Sydney	Lib.
Cape Breton South	82,859	45,632	30,798	14,971	C. Gillis	Glace Bay	C.C.F.
Colchester-Hants	54,893	32,815	26,033	12,660	G. T. Purdy	Truro	Lib.
Cumberland	39,655	23,839	17,223	8,860	A. R. Lusby	Amherst	Lib.
Digby-Annapolis-Kings	66,510	38,432	31,980	16,422	G. C. Nowlan	Wolfville	P.C.
Halifax	162,217	98,208	124,773	34,587 34,222	J. H. Dickey S. R. Balcom	Halifax Halifax	Lib. Lib.
Inverness-Richmond	32,500	20,149	14,438	9,033	A. J. MacEachen	Inverness	Lib.
Pictou	44,002	27,185	21,092	10,626	H. B. McCulloch	New Glasgow	Lib.
Queens-Lunenburg	45,800	29,397	23,262	13,053	Hon. R. H. Winters	Ottawa, Ont.	Lib.
Shelburne-Yarmouth-Clare	45,595	26,422	19,065	11,556	T. A. M. Kirk	Yarmouth	Lib.
New Brunswick— (10 members)							
Charlotte	25,136	15,177	11,869	6,155	A. W. Stuart	St. Andrews	Lib.
Gloucester	57,489	27,699	23,336	13,330	H. Robichaud	Caraquet	Lib.
Kent	26,767	13,451	10,758	7,039	H. J. Michaud	Buctouche	Lib.
Northumberland	42,994	22,182	16,789	10,666	G. R. McWilliam	Newcastle	Lib.
Restigouche-Madawaska	70,541	34,141	26,815	13,266	J. G. Boucher	Edmundston	Lib.
Royal	35,673	21,928	17,897	9,725	A. J. Brooks	Sussex	P.C.
Saint John-Albert	84,407	53,055	38,579	18,881	T. M. Bell	Saint John	P.C.
Victoria-Carleton	40,810	22,661	17,295	8,445	G. W. Montgomery	Woodstock	P.C.
Westmorland	80,012	46,768	37,406	20,160	H. J. Murphy	Moncton	Lib.
York-Sunbury	51,868	30,595	24,646	12,888	Hon. M. F. Gregg	Ottawa, Ont.	Lib.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to July 15, 1954—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Quebec— (75 members)							
Argenteuil - Deux - Montagnes	46,920	27,933	19,132	13,283	P. Valois	Lachute	Lib.
Beauce	54,662	27,519	22,955	13,016	R. Poulin	St. Martin de Beauce	Ind.
Beauharnois-Salaberry	46,311	27,672	19,035	14,269	R. Cauchon	Valleyfield	Lib.
Bellechasse	31,076	16,287	12,077	7,124	L.-P. Picard	Quebec	Lib.
Berthier-Maskinongé-Delanaudière	44,292	24,436	19,062	10,709	J. Langlois	St. Justin	Lib.
Bonaventure	41,121	20,463	15,843	9,177	B. Arsenault	Bonaventure	Lib.
Brome-Missisquoi	38,082	22,137	14,920	9,362	J.-L. Deslières	Sutton	Lib.
Chambly-Rouville	34,522	21,068	15,013	9,824	Hon. R. Pinard	Montreal	Lib.
Champlain	51,190	28,577	22,966	14,420	I. Rochefort	Cap de la Madeleine	Lib.
Chapleau	53,951	30,284	21,279	10,495	D. Gourd	Amos	Lib.
Charlevoix	42,851	22,338	18,179	10,742	A. Maltais	Sillery	Lib.
Châteauguay-Huntingdon-Laprairie	44,343	24,468	18,295	11,104	J. Boucher	Laprairie	Lib.
Chicoutimi	58,043	29,823	24,635	16,046	P.-E. Gagnon	Bagotville	Ind.
Compton-Frontenac	42,428	21,648	17,255	10,365	J.-A. Blanchette	Chartierville	Lib.
Dorchester	36,807	18,625	15,695	7,762	R. Perron	Sillery	P.C.
Drummond-Arthabaska	77,479	40,610	29,430	15,870	A. Cloutier	Drummondville	Lib.
Gaspe	56,050	30,296	23,359	12,058	L. Langlois	Ste. Anne des Monts	Lib.
Gatineau	42,467	23,500	16,538	10,759	J.-C. Nadon[1]	Maniwaki	Lib.
Hull	64,264	37,626	29,491	21,785	A. Caron	Hull	Lib.
Iles-de-la-Madeleine	9,999	4,903	4,300	2,337	C.-A. Cannon	Quebec	Lib.
Joliette - L'Assomption - Montcalm	76,957	42,749	22,908	18,149	M. Breton	Joliette	Lib.
Kamouraska	34,521	18,292	11,951	6,065	A. Massé	Quebec	Lib.
Labelle	42,701	22,298	18,679	9,569	G. Roy	Mont Laurier	Lib.
Lac-Saint-Jean	36,022	17,785	15,549	8,697	A. Gauthier	St. Joseph d'Alma	Lib.
Lapointe	57,861	28,019	22,314	11,854	F. Girard	Jonquière	Ind.
Lévis	41,279	24,095	19,474	13,897	M. Bourget	Lauzon	Lib.
Longueuil	60,437	38,958	25,078	16,688	A. Vincent	Montreal	Lib.
Lotbinière	36,419	18,590	16,088	9,047	Hon. H. Lapointe	Ottawa, Ont.	Lib.
Matapédia-Matane	60,663	29,546	23,673	12,689	L. Thibault	Matane	Lib.
Mégantic	56,873	29,239	22,588	13,951	J. Lafontaine	Thetford Mines	Lib.
Montmagny-L'Islet	37,972	20,151	15,137	10,121	Hon. J. Lesage	Ottawa, Ont.	Lib.
Nicolet-Yamaska	44,248	24,357	19,383	9,483	M. Boisvert	Quebec	Lib.
Pontiac-Témiscamingue	41,899	21,281	15,581	9,041	H. Proudfoot	Fort Coulonge	Lib.
Portneuf	44,351	24,959	18,332	12,701	P. Gauthier	Deschambault	Lib.
Quebec East	79,177	47,504	33,296	25,945	Rt. Hon. L. S. St. Laurent*	Ottawa, Ont.	Lib.
Quebec West	54,726	31,222	23,259	8,464	J. W. Dufresne	Quebec	P.C.
Quebec South	52,834	35,959	25,588	18,950	Hon. C. G. Power	Quebec	Lib.
Quebec-Montmorency	72,659	39,793	30,625	18,029	W. LaCroix	Quebec	Lib.
Richelieu-Verchères	44,386	28,275	19,156	15,406	L. Cardin	Sorel	Lib.
Richmond-Wolfe	52,830	28,114	20,564	13,006	E.-O. Gingras	Marbleton	Lib.
Rimouski	61,776	31,647	24,087	8,554	G. Legaré	Rimouski	Lib.
Roberval	45,984	21,142	17,385	8,646	G. Villeneuve	Mistassini	Lib.
St. Hyacinthe-Bagot	55,430	31,649	Acclamation		J. Fontaine	St. Hyacinthe	Lib.
St. Jean - Iberville - Napierville	49,459	27,829	18,508	16,088	Hon. A. Côté	Ottawa, Ont.	Lib.
St. Maurice-Laflèche	68,606	38,571	29,221	18,662	J.-A. Richard	Shawinigan Falls	Lib.
Saguenay	42,057	23,938	15,679	7,815	L. Brisson	Quebec	Lib.
Shefford	54,618	30,048	22,858	15,409	M. Boivin	Granby	Lib.
Sherbrooke	56,711	34,613	24,211	15,827	M. Gingues	Sherbrooke	Lib.
Stanstead	40,103	22,363	16,927	10,034	L.-E. Roberge	Rock Island	Lib.
Témiscouata	56,383	27,194	18,708	10,675	J.-F. Pouliot	Rivière-du-Loup	Lib.

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[1] Died Dec. 16, 1953; *see* Table **11** for by-election.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to July 15, 1954—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Quebec—concluded							
Terrebonne	68,087	40,035	Acclamation		L. Bertrand	Ste. Thérèse	Lib.
Three Rivers	57,104	34,080	29,714	15,556	L. Balcer	Three Rivers	P.C.
Vaudreuil-Soulanges	26,611	16,790	10,839	8,463	L.-R. Beaudoin	Hudson	Lib.
Villeneuve	69,004	34,910	23,289	14,851	A. Dumas	Malartic	Lib.
Island of Montreal and Ile Jesus—							
Cartier	50,577	26,270	16,553	12,493	L. D. Crestohl	Montreal	Lib.
Dollard	55,056	37,750	23,608	14,964	G. Rouleau	Montreal	Lib.
Hochelaga	69,209	43,080	26,002	19,467	R. Eudes	Montreal	Lib.
Jacques Cartier - Lasalle	72,609	50,195	33,575	19,678	E. Leduc	Lachine	Lib.
Lafontaine	53,720	35,394	20,695	15,285	J.-G. Ratelle	Montreal	Lib.
Laurier	50,244	31,993	18,295	12,648	J.-E. Lefrançois	Montreal	Lib.
Laval	69,044	44,336	27,691	19,337	L. Demers	St. Laurent	Lib.
Maisonneuve-Rosemont	74,146	48,424	29,658	12,266	J. P. Deschatelets	Montreal	Lib.
Mercier	77,934	47,153	28,637	17,479	M. Monette	Pointe-aux-Trembles	Lib.
Mount Royal	77,394	52,067	28,166	17,183	A. A. Macnaughton	Montreal	Lib.
Notre - Dame - de - Grâce	77,886	54,200	33,767	16,690	W. M. Hamilton	Montreal	P.C.
Outremont - St. - Jean	56,397	33,389	17,004	11,536	R. Bourque	Outremont	Lib.
Papineau	69,565	46,149	27,288	10,387	A. Meunier	Montreal	Lib.
St. Ann	45,119	26,451	18,719	15,519	T. P. Healy	Montreal	Lib.
St. Antoine-Westmount	63,883	41,960	25,644	14,441	Hon. D. C. Abbott[1]	Ottawa, Ont.	Lib.
St. Denis	67,993	42,835	24,626	17,359	A. Denis	Montreal	Lib.
St. Henri	63,612	37,998	24,036	15,046	J.-A. Bonnier	Montreal	Lib.
St. Jacques	72,417	47,540	23,892	15,443	R. Beaudry	Montreal	Lib.
St. Lawrence - St. George	47,305	32,032	14,854	9,082	Hon. B. Claxton	Ottawa, Ont.	Lib.
Ste. Marie	66,517	39,048	22,531	16,288	H. Dupuis	Montreal	Lib.
Verdun	77,448	48,147	30,051	20,281	P.-E. Côté[2]	Verdun	Lib.
Ontario—(85 members)							
Algoma East	33,818	16,861	11,473	7,494	Hon. L. B. Pearson	Ottawa	Lib.
Algoma West	51,988	31,094	20,677	10,461	G. E. Nixon	Sault Ste. Marie	Lib.
Brantford	50,702	30,875	21,700	9,576	J. E. Brown	Brantford	Lib.
Brant-Haldimand	46,293	27,540	20,934	10,059	J. A. Charlton	Paris	P.C.
Bruce	28,205	17,735	14,030	7,132	A. E. Robinson	Kincardine	P.C.
Carleton	71,974	48,372	37,038	20,137	Hon. G. A. Drew*	Ottawa	P.C.
Cochrane	39,255	20,290	14,474	6,667	J. A. A. Habel	Kapuskasing	Lib.
Dufferin-Simcoe	41,350	22,905	16,497	9,248	Hon. W. E. Rowe	Newton Robinson	P.C.
Durham	30,115	19,367	14,594	6,684	J. M. James	Bowmanville	Lib.
Elgin	55,518	32,518	23,433	12,482	C. D. Coyle[3]	Straffordville	P.C.
Essex East	80,086	47,992	30,332	19,946	Hon. P. Martin	Ottawa	Lib.
Essex South	45,568	26,324	18,207	10,620	S. M. Clark	Harrow	Lib.
Essex West	90,240	54,380	29,422	15,199	D. Brown	Windsor	Lib.
Fort William	45,675	27,311	20,016	10,402	D. McIvor	Fort William	Lib.
Glengarry-Prescott	43,278	24,232	19,551	7,800	R. Bruneau	Hawkesbury	Lib.
Grenville-Dundas	32,863	21,348	13,911	8,875	A. C. Casselman	Prescott	P.C.
Grey-Bruce	35,430	22,219	15,614	9,236	Hon. W. E. Harris	Ottawa	Lib.
Grey North	36,636	23,343	17,570	8,368	C. E. Bennett	Meaford	Lib.
Halton	44,003	28,882	20,680	9,914	Sybil Bennett	Georgetown	P.C.
Hamilton East	68,489	43,307	26,181	11,622	T. Ross	Hamilton	Lib.
Hamilton South	73,049	47,797	30,568	12,296	R. E. Reinke	Hamilton	Lib.
Hamilton West	72,555	45,262	27,879	13,016	Ellen L. Fairclough	Hamilton	P.C.
Hastings-Frontenac	43,771	26,437	18,850	11,084	G. S. White	Madoc	P.C.
Hastings South	55,640	33,882	26,262	13,170	F. S. Follwell	Belleville	Lib.
Huron	43,497	26,133	21,331	11,045	E. Cardiff	Brussels	P.C.

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[1] Accepted an office of emolument under the Crown effective July 1, 1954; seat vacant at July 15, 1954.
[2] Accepted an office of emolument under the Crown effective Jan. 1, 1954; *see* Table **11** for by-election.
[3] Died Jan. 19, 1954; *see* Table **11** for by-election.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to July 15, 1954—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Ontario—concluded							
Kenora-Rainy River	55,008	29,309	20,230	11,380	W. M. Benidickson	Kenora	L.-Lab.
Kent	63,174	37,329	26,356	15,532	B. Huffman	Blenheim	Lib.
Kingston	55,644	34,349	27,474	14,663	W. J. Henderson	Kingston	Lib.
Lambton-Kent	38,640	23,098	16,802	9,432	H. A. MacKenzie	Watford	Lib.
Lambton West	53,993	33,522	22,283	11,666	J. W. Murphy	Camlachie	P.C.
Lanark	35,601	22,273	15,926	10,029	W. G. Blair	Perth	P.C.
Leeds	38,831	24,830	20,046	10,097	H. Stanton	Seeleys Bay	P.C.
Lincoln	89,366	57,301	37,338	16,113	H. P. Cavers	St. Catharines	Lib.
London	72,396	48,202	31,978	15,254	R. W. Mitchell	London	P.C.
Middlesex East	57,341	36,291	24,364	12,027	H. O. White	Glanworth	P.C.
Middlesex West	32,402	19,815	14,933	8,645	R. McCubbin	Strathroy	Lib.
Niagara Falls	57,808	38,927	22,729	13,400	W. L. Houck	Niagara Falls	Lib.
Nickel Belt	39,148	22,796	15,244	8,821	J. L. Gauthier	Sudbury	Lib.
Nipissing	48,120	27,298	19,834	12,415	J. R. Garland	North Bay	Lib.
Norfolk	42,708	23,666	16,223	8,475	R. E. Anderson	Waterford	Lib.
Northumberland	33,482	21,607	17,792	9,595	F. G. Robertson	Cobourg	Lib.
Ontario	78,231	50,149	30,033	12,482	M. Starr	Oshawa	P.C.
Ottawa East	56,121	35,781	26,919	19,863	J. T. Richard	Ottawa	Lib.
Ottawa West	74,867	49,246	36,538	20,933	G. McIlraith	Ottawa	Lib.
Oxford	58,818	35,547	25,611	12,693	W. Nesbitt	Woodstock	P.C.
Parry Sound-Muskoka	51,686	31,680	22,207	10,940	W. K. McDonald	Sundridge	Lib.
Peel	55,673	38,786	25,515	13,487	G. Graydon[1]	Brampton	P.C.
Perth	51,022	32,707	24,100	12,959	J. W. Monteith	Stratford	P.C.
Peterborough	53,123	33,447	25,358	13,206	G. K. Fraser	Lakefield	P.C.
Port Arthur	66,994	35,410	24,753	12,272	Rt. Hon. C. D. Howe	Ottawa	Lib.
Prince Edward-Lennox	31,111	19,131	12,634	6,726	G. J. Tustin	Napanee	P.C.
Renfrew North	37,188	20,907	16,851	9,360	J. M. Forgie	Pembroke	Lib.
Renfrew South	31,624	19,093	15,562	8,627	Hon. J. J. McCann	Ottawa	Lib.
Russell	56,951	33,169	24,578	15,969	J.-O. Gour	Casselman	Lib.
Simcoe East	46,769	27,459	20,124	9,099	W. A. Robinson	Midland	Lib.
Simcoe North	33,762	22,690	16,275	8,316	J. H. Ferguson	Collingwood	P.C.
Stormont	48,458	27,587	20,999	13,503	Hon. L. Chevrier[2]	Ottawa	Lib.
Sudbury	58,276	31,914	21,526	12,193	D. R. Mitchell	Sudbury	Lib.
Timiskaming	49,658	25,654	18,889	7,497	Ann Shipley	Kirkland Lake	Lib.
Timmins	45,924	23,103	14,077	5,541	K. A. Eyre	Timmins	Lib.
Victoria	43,654	28,352	21,830	12,634	C. W. Hodgson	Haliburton	P.C.
Waterloo North	78,482	50,457	32,519	16,139	N. C. Schneider	Kitchener	Lib.
Waterloo South	47,641	30,374	21,875	9,058	A. W. A. White	Galt	Lib.
Welland	65,425	40,393	28,255	15,411	W. H. McMillan	Thorold	Lib.
Wellington-Huron	30,462	18,724	14,420	7,198	W. M. Howe	Arthur	P.C.
Wellington South	43,350	27,196	20,576	9,275	H. A. Hosking	Guelph	Lib.
Wentworth	51,990	35,010	22,292	10,476	F. E. Lennard	Dundas	P.C.
York Centre	66,505	53,779	31,938	13,903	A. H. Hollingworth	Toronto	Lib.
York East	65,169	45,061	26,319	11,062	R. H. McGregor	Toronto	P.C.
York-Humber	63,279	44,859	27,545	11,157	Margaret Aitken	Toronto	P.C.
York North	51,059	33,501	22,661	10,988	J. Smith	Richmond Hill	Lib.
York-Scarborough	72,117	55,811	34,356	14,889	F. Enfield	Toronto	Lib.
York South	90,454	62,202	34,381	12,216	J. W. Noseworthy	Toronto	C.C.F.
York West	64,891	48,605	29,845	12,228	R. Adamson[3]	Port Credit	P.C.
City of Toronto—							
Broadview	59,676	39,136	21,302	10,403	G. H. Hees	Toronto	P.C.
Danforth	71,895	51,736	31,163	12,595	R. H. Small	Toronto	P.C.
Davenport	60,228	38,035	22,002	8,919	P. T. Hellyer	Toronto	Lib.
Eglinton	72,208	51,266	31,173	17,354	D. M. Fleming	Toronto	P.C.
Greenwood	57,876	38,351	22,353	9,702	J. M. Macdonnell	Toronto	P.C.
High Park	58,009	38,281	23,303	10,032	A. J. P. Cameron	Toronto	Lib.
Parkdale	57,079	36,847	22,027	10,391	J. Hunter	Toronto	Lib.
Rosedale	56,341	36,181	21,511	8,702	C. Henry	Toronto	Lib.
St. Paul's	61,486	42,516	23,901	9,738	R. Michener	Toronto	P.C.
Spadina	85,479	52,220	28,004	15,496	D. A. Croll	Toronto	Lib.
Trinity	62,871	34,778	20,083	8,056	L. Conacher[4]	Toronto	Lib.

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[1] Died Sept. 19, 1953; *see* Table **11** for by-election.

[2] Accepted an office of emolument under the Crown effective July 1, 1954; seat vacant at July 15, 1954.

[3] Died Apr. 8, 1954; seat vacant at July 15, 1954.

[4] Died May 26, 1954; seat vacant at July 15, 1954.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to July 15, 1954—continued.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
Manitoba—							
(14 members)							
Brandon-Souris	56,589	34,989	24,145	13,915	W. G. Dinsdale	Brandon	P.C.
Churchill	43,323	21,666	12,464	4,984	G. D. Weaver	Flin Flon	Lib.
Dauphin	42,141	24,062	16,172	6,839	F. S. Zaplitny	Dauphin	C.C.F.
Lisgar	46,921	25,981	14,623	6,581	W. A. Pommer	Manitou	Lib.
Marquette	48,626	28,668	18,226	9,900	Hon. S. S. Garson	Ottawa, Ont.	Lib.
Portage-Neepawa	50,469	28,836	17,946	8,958	W. G. Weir	Carman	Lib.
Provencher	40,315	20,525	10,163	6,632	R. N. Jutras	Letellier	Lib.
St. Boniface	53,067	31,179	18,822	8,051	F. Viau	St. Boniface	Lib.
Selkirk	47,037	25,012	14,412	6,265	R. J. Wood	Teulon	Lib.
Springfield	40,275	21,814	12,521	6,240	A. B. Weselak	Beausejour	Lib.
Winnipeg North	81,311	51,637	31,090	15,005	A. Stewart	Winnipeg	C.C.F.
Winnipeg North Centre	75,599	45,303	24,078	12,713	S. H. Knowles	Winnipeg	C.C.F.
Winnipeg South	75,820	52,433	32,080	12,597	O. C. Trainor	Winnipeg	P.C.
Winnipeg South Centre	75,048	53,269	29,680	12,489	G. Churchill	Winnipeg	P.C.
Saskatchewan—							
(17 members)							
Assiniboia	47,894	26,506	20,498	10,596	H. R. Argue	Kayville	C.C.F.
Humboldt-Melfort	52,286	27,811	21,036	9,512	H. A. Bryson	Tisdale	C.C.F.
Kindersley	44,720	26,475	20,621	8,672	M. Johnson	Beadle	C.C.F.
Mackenzie	50,741	25,352	18,392	8,021	A. M. Nicholson	Sturgis	C.C.F.
Meadow Lake	35,424	17,633	11,726	5,080	J. H. Harrison	Medstead	Lib.
Melville	43,173	24,090	20,167	10,024	Rt. Hon. J. G. Gardiner	Ottawa, Ont.	Lib.
Moose Jaw - Lake Centre	53,607	34,279	23,908	12,436	W. R. Thatcher	Moose Jaw	C.C.F.
Moose Mountain	40,939	22,901	18,415	8,697	E. G. McCullough	Manor	C.C.F.
Prince Albert	53,564	28,793	22,890	10,038	J. G. Diefenbaker	Prince Albert	P.C.
Qu'Appelle	40,456	22,757	18,267	6,988	H. P. Mang	Edenwold	Lib.
Regina City	66,078	44,153	32,069	14,558	A. C. Ellis	Regina	C.C.F.
Rosetown-Biggar	44,135	26,682	20,624	11,404	M. J. Coldwell*	Ottawa, Ont.	C.C.F.
Rosthern	49,455	25,933	19,074	8,616	W. A. Tucker	Rosthern	Lib.
Saskatoon	56,196	38,838	25,210	12,056	R. R. Knight	Saskatoon	C.C.F.
Swift Current-Maple Creek	50,539	31,394	23,470	10,088	I. Studer	Lac Pelletier	Lib.
The Battlefords	50,913	27,556	18,884	8,922	M. Campbell	Neilburg	C.C.F.
Yorkton	51,608	29,379	21,228	11,027	G. H. Castleden	Yorkton	C.C.F.
Alberta—							
(17 members)							
Acadia	43,832	26,157	17,417	7,956	V. Quelch	Banff	S.C.
Athabasca	51,559	26,563	15,543	7,293	J. M. Dechene	Bonnyville	Lib.
Battle River-Camrose	56,913	30,641	18,344	9,238	R. Fair	Vermilion	S.C.
Bow River	44,795	23,993	15,495	7,320	C. E. Johnston	Calgary	S.C.
Calgary North	67,358	47,448	29,841	11,002	D. S. Harkness	Calgary	P.C.
Calgary South	70,590	48,790	30,198	12,491	C. O. Nickle	Calgary	P.C.
Edmonton East	62,843	39,263	22,094	8,802	A. Holowach	Edmonton	S.C.
Edmonton-Strathcona	56,093	39,202	24,044	8,901	R. F. L. Hanna	Edmonton	Lib.
Edmonton West	68,299	45,223	26,501	11,301	Hon. G. Prudham	Ottawa, Ont.	Lib.
Jasper-Edson	56,605	30,133	18,975	7,639	C. Yuill	Barrhead	S.C.
Lethbridge	56,613	26,492	17,355	9,737	J. H. Blackmore	Cardston	S.C.
Macleod	49,506	26,992	18,087	8,685	E. G. Hansell	Vulcan	S.C.
Medicine Hat	48,656	28,356	19,490	9,305	W. D. Wylie	Medicine Hat	S.C.
Peace River	61,015	31,925	20,876	10,151	S. E. Low*	Ottawa, Ont.	S.C.
Red Deer	46,496	26,688	16,883	8,792	F. D. Shaw	Innisfail	S.C.
Vegreville	47,475	25,118	17,201	8,023	J. Decore	Vegreville	Lib.
Wetaskiwin	50,853	25,763	14,914	6,920	R. Thomas	Wetaskiwin	S.C.

10.—Electoral Districts, Voters on List and Votes Polled, Names and Addresses of Members of the House of Commons, as Elected at the Twenty-Second General Election, Aug. 10, 1953, and Revised to July 15, 1954—concluded.

Province and Electoral District	Population, Census 1951	Voters on List	Total Votes Polled	Votes Polled by Member	Name of Member	P.O. Address	Party Affiliation
	No.	No.	No.	No.			
British Columbia—(22 members)							
Burnaby-Coquitlam	49,633	29,679	19,324	7,232	E. Regier	New Westminster	C.C.F.
Burnaby-Richmond	51,540	31,784	20,621	7,021	T. Goode	Burnaby	Lib.
Cariboo	40,244	25,860	15,225	5,562	B. R. Leboe	Prince George	S.C.
Coast-Capilano	65,645	44,177	29,822	13,614	Hon. J. Sinclair	Ottawa, Ont.	Lib.
Comox-Alberni	52,015	29,744	17,834	6,115	T. S. Barnett	Alberni	C.C.F.
Esquimalt-Saanich	45,569	30,907	20,832	9,537	G. R. Pearkes	Victoria	P.C.
Fraser Valley	64,070	35,689	23,314	9,618	A. B. Patterson	Abbotsford	S.C.
Kamloops	44,318	25,175	16,451	7,578	E. D. Fulton	Kamloops	P.C.
Kootenay East	33,223	18,675	13,329	4,988	J. Byrne	Kimberley	Lib.
Kootenay West	49,570	26,960	18,485	8,990	H. W. Herridge	Nakusp	C.C.F.
Nanaimo	45,857	27,583	18,960	7,272	C. Cameron	Victoria	C.C.F.
New Westminster	81,533	52,111	34,982	10,770	G. Hahn	New Westminster	S.C.
Okanagan Boundary	54,004	29,562	20,860	8,086	O. L. Jones	Kelowna	C.C.F.
Okanagan-Revelstoke	29,477	16,622	11,884	3,537	G. W. McLeod	Enderby	S.C.
Skeena	36,685	20,937	12,431	5,332	E. T. Applewhaite	Prince Rupert	Lib.
Vancouver-Burrard	61,416	43,874	26,196	9,035	J. L. MacDougall	Vancouver	Lib.
Vancouver Centre	47,528	35,263	20,421	8,259	Hon. R. O. Campney	Ottawa, Ont.	Lib.
Vancouver East	54,089	34,214	20,310	10,192	H. E. Winch	Vancouver	C.C.F.
Vancouver-Kingsway	55,048	35,453	22,170	10,162	A. MacInnis	Vancouver	C.C.F.
Vancouver Quadra	64,131	43,367	29,320	12,769	H. C. Green	Vancouver	P.C.
Vancouver South	64,926	43,625	28,732	10,459	E. Philpott	Vancouver	Lib.
Victoria	74,689	49,621	33,953	13,696	F. T. Fairey	Victoria	Lib.
Yukon Territory—(1 member)							
Yukon	9,096	5,028	3,818	2,176	J. A. Simmons	Whitehorse	Lib.
Northwest Territories—(1 member)							
Mackenzie River	10,279	5,682	3,596	1,722	M. A. Hardie	Yellowknife	Lib.

11.—By-Elections from the Date of the General Election, Aug. 10, 1953, to July 15, 1954[1]

Electoral District and Province	Date of By-election	Voters on List	Candidates	Votes Polled	Name of New Member	P.O. Address	Party Affiliation
		No.	No.	No.			
Elgin, Ont.	Mar. 22, 1954	32,479	2	22,670	J. A. McBain	St. Thomas	P.C.
Gatineau, Que.	Mar. 22, 1954	23,328	4	10,756	R. Leduc	Maniwaki	Lib.
Peel, Ont.	Mar. 22, 1954	40,844	3	24,699	J. Pallett	Port Credit	P.C.
Verdun, Que.	Mar. 22, 1954	48,790	7	25,435	Y. Leduc	Verdun	Lib.

[1] By-elections from July 15, 1954, to the date of going to press are included in Appendix I.

The Opposition.—The Opposition occupies an essential place in constitutions based on the British parliamentary system. Like many other institutions, such as that of the premiership, for instance, it is founded on the unwritten customs that have been accepted and become firmly established.

The choice of the Canadian electorate not only determines who shall govern Canada but, by deciding which party receives the second largest number of seats in the House of Commons, it designates which of the major parties becomes the Official Opposition. The function of the Leader of the Opposition is to offer intelligent and constructive criticism of the Government of the day.

When criticism by the Opposition becomes sufficiently effective it can overthrow the existing Government and the Leader of the Opposition might then, as a result of the ensuing election, become Prime Minister.

Although the position of Leader of the Opposition is not recognized in the British North America Act, it received statutory acknowledgment in Canada in 1927. The Senate and House of Commons Act of that year provided for an annual salary to be paid to the Leader of the Opposition in addition to his indemnity as a Member of the House.

Indemnities and Allowances.—Members of the Senate receive a sessional allowance at the rate of $8,000 per annum. In addition, they receive, at the end of each calendar year, an annual expense allowance of $2,000 which is subject to income tax. Members of the House of Commons are paid a sessional allowance at the rate of $8,000 per annum. In addition, they receive $2,000 as an expense allowance paid at the end of each calendar year. This allowance, except in the case of Ministers of the Crown and the Leaders of the Opposition in the House and in the Senate, is not subject to income tax. The remuneration of the Prime Minister is $25,000 a year and of a Cabinet Minister and the Leader of the Opposition $15,000 a year, in addition to the sessional allowance and expense allowance each receives as a Member of Parliament. A Cabinet Minister is also entitled to a motor-car allowance of $2,000. The Speakers of the Senate and of the House of Commons receive, besides their sessional allowance and expense allowance, a salary of $9,000 and a motor-car allowance of $1,000 and are also entitled to $3,000 in lieu of a residence. The Deputy Speaker of the House of Commons receives a salary of $6,000 and an allowance of $1,500 in lieu of a residence. The Deputy Chairman of Committees receives an annual allowance of $2,000. Parliamentary Assistants to the Ministers of the Crown receive $8,000 sessional allowance as Members of Parliament, $4,000 a year as Parliamentary Assistants and the $2,000 expense allowance paid to all Members of Parliament.

The Federal Government Franchise.—The present franchise laws are contained in the Canada Elections Act (R.S.C. 1952, c. 23). The franchise is conferred upon all Canadian citizens or British subjects, men and women, who have attained the age of 21 years and who have been ordinarily resident in Canada for 12 months prior to polling day at a federal election, and ordinarily resident in the electoral district on the date of the issue of the writ ordering such election. Persons denied the right to vote are:—

(1) Judges appointed by the Governor General in Council;
(2) The returning officer for each electoral district;
(3) Persons undergoing punishment as inmates of any penal institution for the commission of any offence;
(4) Indians ordinarily resident on an Indian reserve who were not members of His Majesty's Forces in World Wars I or II, or who did not execute a waiver of exemption under the Indian Act from taxation on and in respect of personal property;
(5) Persons restrained of their liberty or deprived of the management of their property by reason of mental disease;
(6) Persons disqualified, under any law relating to the disqualification of electors, for corrupt and illegal practices.

The Canadian Forces Voting Regulations set out in the Schedule to the Canada Elections Act prescribe voting procedure for members of the Armed Forces of Canada and also for veterans in receipt of treatment or domiciliary care in certain institutions.

12.—Voters on the Lists and Votes Polled at the Federal General Elections of 1940, 1945, 1949 and 1953

NOTE.—Corresponding statistics for the general elections of 1911, 1917, 1921 and 1925 are given in the 1926 Year Book, p. 82; those for 1926 in the 1945 edition, p. 66; those for 1930 and 1935 in the 1948–49 edition, p. 94.

Province or Territory	Voters on the Lists				Votes Polled			
	1940	1945	1949	1953	1940	1945	1949	1953
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	...	...	182,439	194,715	...	...	105,190	111,768
P. E. Island	55,339	54,794	55,772	55,469	62,943[1]	63,807[1]	68,393[1]	66,562[1]
Nova Scotia	335,990	362,754	373,585	380,836	283,428[2]	312,954[2]	338,928[2]	334,855[2]
New Brunswick	251,986	262,261	286,723	287,657	174,734	204,273	225,877	225,390
Quebec	1,799,942	1,956,225	2,177,152	2,352,619	1,189,489	1,433,591	1,610,510	1,565,400
Ontario	2,340,344	2,457,937	2,718,118	2,894,150	1,625,439	1,831,806	2,042,294	1,938,959
Manitoba	425,066	433,921	451,882	465,374	320,860	327,794	324,079	276,422
Saskatchewan	481,931	445,601	472,884	480,532	373,376	379,539	375,471	356,479
Alberta	423,609	430,430	492,228	548,747	272,418	315,863	341,222	343,258
British Columbia	472,584	545,077	673,782	730,882	368,103	433,402	464,785	475,456
Yukon Territory[3]	2,097	3,445	9,064	5,028	1,741	2,164	6,823	3,818
Northwest Territories[4]	...	...	...	5,682	...	...	...	3,596
Totals	**6,588,888**	**6,952,445**	**7,893,629**	**8,401,691**	**4,672,531**	**5,305,193**	**5,903,572**	**5,701,963**

[1] Each voter in the double-member constituency of Queens County, P.E.I., had two votes; in 1953, 25,285 voters on the list cast 40,508 votes. [2] Each voter in the double-member constituency of Halifax, N.S., had two votes; in 1953, 98,208 voters on the list cast 124,773 votes. [3] Electoral District of Yukon. [4] Electoral District of Mackenzie River.

Subsection 3.—The Judiciary

The Federal Judiciary

The Parliament of Canada is empowered by Sect. 101 of the British North America Act to provide from time to time for the constitution, maintenance and organization of a general Court of Appeal for Canada and for the establishment of any additional courts for the better administration of the laws of Canada. Under this provision, Parliament has established the Supreme Court of Canada, the Exchequer Court of Canada and certain miscellaneous courts.

Supreme Court of Canada.—This Court, first established in 1875 and now governed by the Supreme Court Act (R.S.C. 1952, c. 259), consists of a chief justice, who is called the Chief Justice of Canada, and eight puisne judges. The chief justice and the puisne judges are appointed by the Governor in Council and they hold office during good behaviour but are removable by the Governor General on address of the Senate and the House of Commons. They cease to hold office upon attaining the age of 75 years. The Court sits at Ottawa and exercises general appellate jurisdiction throughout Canada in civil and criminal cases. The Court is also required to consider and advise upon questions referred to it by the Governor in Council and it may also advise the Senate or the House of Commons on Private Bills referred to the Court under any rules or orders of the Senate or the House of Commons.

Appeals may be brought from any final judgment of the highest court of final resort in a province in any case where the amount or value of the matter in controversy exceeds the sum of $2,000. An appeal may be brought from any other final judgment with leave of the highest court of final resort in the province; if such court refuses to grant leave, the Supreme Court of Canada may grant leave to appeal. The Supreme Court may grant leave to appeal from any judgment, whether final or not. Appeals in respect of indictable offences are regulated by the Criminal Code. Appeals from federal courts are regulated by the statute establishing such courts.

The judgment of the Supreme Court of Canada in all cases is final and conclusive.

13.—Chief Justice and Judges of the Supreme Court of Canada, as at July 15, 1954

(In order of seniority)

Name	Date of Appointment
The Hon. Chief Justice PATRICK KERWIN	July 1, 1954[1]
The Hon. Justice ROBERT TASCHEREAU	Feb. 9, 1940
The Hon. Justice I. C. RAND	Apr. 22, 1943
The Hon. Justice ROY L. KELLOCK	Oct. 3, 1944
The Hon. Justice JAS. W. ESTEY	Oct. 6, 1944
The Hon. Justice CHARLES H. LOCKE	June 3, 1947
The Hon. Justice JOHN R. CARTWRIGHT	Dec. 23, 1949
The Hon. Justice J. H. GERALD FAUTEUX	Dec. 23, 1949
The Hon. Justice DOUGLAS CHARLES ABBOTT	July 1, 1954

[1] First appointed as a Judge of the Supreme Court, July 20, 1935.

Exchequer Court.—The Exchequer Court of Canada was first established in 1875 as part of the Supreme Court of Canada but is now a separate court governed by the Exchequer Court Act (R.S.C. 1952, c. 98). The Court consists of a president and four puisne judges who are appointed by the Governor in Council. The president and the puisne judges hold office during good behaviour but may be removed by the Governor General on address of the Senate and the House of Commons. They cease to hold office upon attaining the age of 75 years. The Court sits at Ottawa and also at any other place in Canada for which sittings may be fixed by the Court. The jurisdiction of the Court extends to cases where claims are made by or against the Crown in right of Canada. Proceedings against the Crown are taken by petition of right pursuant to the Petition of Right Act (R.S.C. 1952, c. 210).

An appeal lies to the Supreme Court of Canada from any final judgment of the Exchequer Court in which the amount in controversy exceeds $500; an appeal also lies with leave of the Supreme Court in certain cases where the amount in controversy does not exceed $500 or where the judgment is not final.

The Exchequer Court also exercises admiralty jurisdiction in Canada. Admiralty jurisdiction was first conferred in 1891 by the Admiralty Act (54-55 Vict., c. 29) and the admiralty jurisdiction is now governed by the Admiralty Act (R.S.C.

1952, c. 1). Under this Statute the Exchequer Court is continued as a Court of Admiralty. The president and puisne judges of the Exchequer Court exercise admiralty jurisdiction throughout the whole of Canada. In addition, Canada is divided into various admiralty districts; a district judge in admiralty is appointed for each district. Appeals to the Supreme Court of Canada from judgments of the president or the puisne judges are governed by the general appeal provisions in the Exchequer Court Act. Appeals may be taken from a final judgment of a district judge in admiralty either to the Exchequer Court or direct to the Supreme Court of Canada.

Miscellaneous Courts.—*Railway Act.*—The Railway Act, 1903 (R.S.C. 1952, c. 234), established the Board of Railway Commissioners for Canada as a court of record; by the Transport Act, 1938 (R.S.C. 1952, c. 271), the name was changed to the Board of Transport Commissioners for Canada. This Court exercises jurisdiction with respect to railway matters. The Governor in Council is given jurisdiction to vary any order of the Board and an appeal lies from the Board to the Supreme Court of Canada upon a question of jurisdiction or a question of law.

Bankruptcy Act.—By virtue of para. 21 of Sect. 91 of the British North America Act, 1867, Parliament has exclusive legislative jurisdiction in relation to bankruptcy and insolvency. By the Bankruptcy Act (R.S.C. 1952, c. 14) the superior courts of the provinces are constituted bankruptcy courts; original jurisdiction is conferred upon the trial courts and appellate jurisdiction is conferred upon the appeal courts of the provinces.

Farmers' Creditors Arrangement Act.—Under the Farmers' Creditors Arrangement Act (R.S.C. 1952, c. 111), the county or district courts of the provinces are established as courts for the purposes of this Act and the appeal courts of the provinces are given appellate jurisdiction.

Income Tax Appeal Board.—By the Income Tax Act (R.S.C. 1952, c. 148) an Appeal Board is established, consisting of a chairman and not fewer than two or more than four members, with jurisdiction over appeals against income tax assessments. A further appeal may be taken to the Exchequer Court.

Provincial Judiciaries*

Certain provisions of the British North America Act govern, to some extent, the provincial judiciaries. Under Sect. 92 (14) the legislature of each province exclusively may make laws in relation to the administration of justice in the province including the constitution, maintenance and organization of provincial courts, both of civil and of criminal jurisdiction. Sect. 96 provides that the Governor General in Council shall appoint the judges of the superior, district, and county courts in each province except those of the courts of probate in Nova Scotia and New Brunswick. Sect. 100 provides that the salaries, allowances and pensions of judges of the superior, district and county courts (except the courts of probate in Nova Scotia and New Brunswick) are to be fixed and provided by the Parliament of Canada and these are set out in the Judges Act (R.S.C. 1952, c. 157). Under Sect. 99 the judges of the superior courts hold office during good behaviour but are removable by the Governor General on address of the Senate and House of Commons. The tenure of office of district and county court judges is fixed by the Judges Act as being during good behaviour and their residence within the county or union of counties for which the court is established.

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* More detailed information concerning provincial judiciaries is given in the 1954 Year Book, pp. 48-55.

All provinces have minor courts with limited civil and criminal jurisdiction, the judges of which are appointed by provincial authority as, for example, Justices of the Peace, Magistrates and Juvenile Court Judges. Except in Quebec, there are County or District Courts of each province with limited jurisdiction varying from $500 to $2,500 in amount. Each province has a superior court with virtually unlimited jurisdiction variously known as Court of Queen's Bench, Supreme Court, Superior Court, etc., and there is a Court of Appeal in each province.

Section 2.—Provincial and Territorial Governments*

In each of the provinces, the Queen is represented by a Lieutenant-Governor appointed by the Governor General in Council. The Lieutenant-Governor acts on the advice and with the assistance of his Ministry or Executive Council, which is responsible to the Legislature and resigns office when it ceases to enjoy the confidence of that body.

The Legislature of each province is unicameral, consisting of the Lieutenant-Governor and a Legislative Assembly, except for the Province of Quebec where there is a Legislative Council as well as a Legislative Assembly.

The Legislative Assembly is elected by the people for a statutory term of five years but may be dissolved within that period by the Lieutenant-Governor on the advice of the Premier of the province.

The source of legislative authority of the Provincial Legislatures is the British North America Act, 1867 (30-31 Vict., c. 3 and amendments). Under Sect. 92 of the Act, the Legislature of each province exclusively may make laws in relation to the following matters: amendment of the constitution of the province except as regards the Lieutenant-Governor; direct taxation within the province; borrowing of money on the credit of the province; establishment and tenure of provincial offices and appointment and payment of provincial officers; the management and sale of public lands belonging to the province and of the timber and wood thereon; the establishment, maintenance and management of public and reformatory prisons in and for the province; the establishment, maintenance and management of hospitals, asylums, charities and eleemosynary institutions in and for the province, other than marine hospitals; municipal institutions in the province; shop, saloon, tavern, auctioneer and other licences issued for the raising of provincial or municipal revenue; local works and undertakings, other than interprovincial or international lines of ships, railways, canals, telegraphs, etc., or works which, though wholly situated within one province, are declared by the Federal Parliament to be for the general advantage either of Canada or of two or more provinces; the incorporation of companies with provincial objects; the solemnization of marriage in the province; property and civil rights in the province; the administration of justice in the province, including the constitution, maintenance and organization of provincial courts both of civil and criminal jurisdiction, and including procedure in civil matters in these courts; the imposition of punishment by fine, penalty or imprisonment for enforcing any law of the province relating to any of the aforesaid subjects; generally, all matters of a merely local or private nature in the province.

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* The information given in Subsections 1 to 10 of this Section is brought up to Mar. 31, 1954. Provincial elections held between that date and the date of going to press are covered in the Appendix.

Further, in and for each province the Legislature exclusively may, under Sect. 93, make laws in relation to education, subject to certain restrictions relating to the establishment of schools by religious minorities. These powers, with similar restrictions, were conferred on the more recently admitted provinces on their inclusion as units in the federation.

The Provincial Legislatures may also make laws, under Sect. 95, in relation to agriculture and immigration, subject to any laws of the Parliament of Canada in relation to these subjects.

Provincial Franchise.—The main qualifications for persons entitled to be registered as voters in provincial elections are given below and apply, with modifications, to voters in all provinces:—

> Every person, male or female, at the age of 21 years, who is a Canadian citizen or a British subject and was resident in the province of registration 12 months prior to the election date and with a certain residence requirement in the province and within the electoral district of polling, and who falls under no statutory disqualifications, is entitled to be registered as a voter.

The principal exception to the above gives voting privileges to persons in Saskatchewan at the age of 18 and in Alberta and British Columbia at 19 years. The Elections Act of each province contains details regarding qualifications and disqualifications of the franchise.

Subsection 1.—Newfoundland

The Government of Newfoundland consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly. Colonel the Honourable Sir Leonard Outerbridge is the present Lieutenant-Governor of the Province; he was commissioned on Aug. 17, 1949.

The Legislative Assembly has 28 members elected for a term of five years. The General Assembly elected Nov. 26, 1951, is the 30th in the history of Newfoundland and the 2nd since Confederation.

The Premier and each Cabinet Minister receives a salary of $7,000 per annum plus a sessional indemnity of $3,000. Each Member of the House of Assembly receives a sessional indemnity of $3,000. An additional allowance of $2,000 is made to the Leader of the Opposition.

14.—Legislatures of Newfoundland since Confederation and Ministry as at Mar. 31, 1954

Legislatures, 1949-54

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
May 27, 1949	1st General Assembly	4	July 13, 1949	Nov. 3, 1951
Nov. 26, 1951	2nd General Assembly	4	Mar. 12, 1952	[1]

[1] Life of Legislature not expired at Mar. 31, 1954.

First Ministry

(Party standing at latest General Election, Nov. 26, 1951: 22 Liberals; 4 Progressive Conservatives; 2 vacant.)

NOTE.—Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Minister of Economic Development	Hon. J. R. SMALLWOOD	Apr. 1, 1949	Apr. 1, 1949
Attorney General	Hon. L. R. CURTIS	Apr. 1, 1949	Apr. 1, 1949
Minister of Public Welfare	Hon. H. L. POTTLE	Apr. 4, 1949	Apr. 4, 1949
Minister of Fisheries and Co-operatives	Hon. W. J. KEOUGH	July 29, 1949	July 29, 1949
Minister of Public Works	Hon. E. S. SPENCER	July 29, 1949	July 29, 1949
Minister of Education	Hon. J. R. CHALKER	Apr. 4, 1950	Dec. 23, 1952
Minister of Labour	Hon. C. H. BALLAM	Apr. 4, 1950	Apr. 4, 1950
Minister of Health	Hon. P. S. FORSEY	July 29, 1950	Dec. 23, 1952
Minister of Municipal Affairs and Supply	Hon. S. J. HEFFERTON	July 29, 1949	Dec. 23, 1952
Minister of Finance	Hon. GREGORY J. POWER	Dec. 15, 1951	Dec. 15, 1951
Minister of Provincial Affairs	Hon. MYLES P. MURRAY	Dec. 15, 1951	Dec. 15, 1951
Minister of Natural Resources	Hon. F. W. ROWE	May 21, 1952	May 21, 1952
Minister without portfolio	Hon. P. J. LEWIS	Dec. 15, 1951	Dec. 15, 1951

Subsection 2.—Prince Edward Island

The Government of Prince Edward Island consists of a Lieutenant-Governor, an Executive Council and a Legislative Assembly.

The Honourable T. W. L. Prowse, the present Lieutenant-Governor of the Province, was commissioned to office on Oct. 4, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 86.

The General Assembly elected Apr. 26, 1951, is the 47th in the history of Prince Edward Island Legislatures and the 22nd since Confederation. It has 30 members from 15 electoral districts who serve for a statutory term of five years. One-half of the Members of the Legislative Assembly are elected on a property vote. Each district elects one Councillor (elected on a property vote) and one Assembly member (elected on a general franchise vote).

The annual salary of the Premier is $6,000 and the salaries of the Cabinet Ministers are as follows: Attorney and Advocate General and Provincial Treasurer, $5,000; Minister of Health and Welfare, Minister of Public Works and Highways, Minister of Industry and Natural Resources, Minister of Agriculture, $4,000 each; Minister of Education and Provincial Secretary, $3,000 each. Each Member of the Assembly is paid the sum of $1,000 for each session attended by him and an additional amount of $500, tax free, as indemnity for expenses incurred. The Speaker is paid an additional sum of $400 and a further additional amount of $200, tax free, as an indemnity. The Leader of the Opposition is paid an additional sum of $800 and a further additional amount of $200, tax free, for expenses incurred by him in relation to his official duties.

15.—Legislatures and Premiers of Prince Edward Island, 1935-54, and Ministry as at Mar. 31, 1954

Legislatures, 1935-1954[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
July 23, 1935	18th General Assembly	5	Sept. 25, 1935	Apr. 21, 1939
May 18, 1939	19th General Assembly	4	Mar. 20, 1940	Aug. 20, 1943
Sept. 15, 1943	20th General Assembly	4	Feb. 15, 1944	Oct. 27, 1947
Dec. 11, 1947	21st General Assembly	5	Feb. 24, 1948	Mar. 30, 1951
Apr. 26, 1951	22nd General Assembly	[2]	Oct. 23, 1951	[2]

[1] The Ministries from 1935-54 were: 19th Ministry, sworn in Oct. 14, 1933, under the leadership of Hon. W. J. P. MacMillan; 20th Ministry, sworn in Aug. 15, 1935, under the leadership of Hon. W. M. Lea; 21st Ministry, sworn in Jan. 14, 1936, under the leadership of Hon. T. A. Campbell; 22nd Ministry, sworn in May 11, 1943, under the leadership of Hon. J. Walter Jones; 23rd Ministry sworn in May 25, 1953, under the leadership of Hon. A. W. Matheson. [2] Life of Legislature not expired at Mar. 31, 1954.

Twenty-Third Ministry

(Party standing at latest General Election, Apr. 26, 1951: 24 Liberals and 6 Progressive Conservatives.)

NOTE.—Ministers are shown at date of original appointment as a Minister and at date of appointment to present portfolio, despite the formation of a new Ministry consequent upon the appointment of a new Premier. Date of appointment does not necessarily mean that the Minister was sworn in on date given.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and President of the Executive Council	Hon. ALEXANDER W. MATHESON	May 11, 1943	May 25, 1953
Minister of Health and Welfare	Hon. B. EARLE MACDONALD	May 25, 1953	May 25, 1953
Minister of Agriculture	Hon. C. CLEVELAND BAKER	Apr. 16, 1949	Oct. 13, 1949
Provincial Secretary	Hon. WILLIAM HUGHES	May 11, 1943	May 25, 1953
Minister of Industry and Natural Resources	Hon. EUGENE CULLEN	Apr. 16, 1949	Oct. 13, 1949
Attorney and Advocate General and Provincial Treasurer	Hon. WALTER E. DARBY	Oct. 13, 1949	Oct. 13, 1949
Minister of Public Works and Highways	Hon. DOUGALD MACKINNON	Sept. 16, 1939	June 16, 1951
Minister of Education	Hon. KEIR CLARK	June 16, 1951	June 16, 1951
Minister without portfolio	Hon. EDWARD P. FOLEY[1]	June 10, 1954	June 10, 1954

[1] Added to table after Mar. 31, 1954.

Subsection 3.—Nova Scotia

The Government of the Province of Nova Scotia has a Lieutenant-Governor, an Executive Council and a House of Assembly.

The Honourable Alistair Fraser, the present Lieutenant-Governor, was commissioned to office Sept. 1, 1952. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 87.

The General Assembly has 37 members elected for five years, the maximum duration of its existence. The Assembly elected May 26, 1953, was the 45th in Nova Scotia's history and the 22nd since Confederation.

The Premier of the Province receives a salary of $12,000 per annum and each Cabinet Minister a salary of $10,000 per annum. Each Member of the House of Assembly receives a sessional indemnity of $2,400 and an allowance of $1,200 for expenses incidental to the discharge of his duties. The Leader of the Opposition receives an allowance of $3,000 in addition to his sessional indemnity.

16.—Legislatures and Premiers of Nova Scotia, 1933-54, and Ministry as at Mar. 31, 1954

Legislatures, 1933-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Aug. 22, 1933	17th General Assembly	4	Mar. 1, 1934	May 20, 1937
June 29, 1937	18th General Assembly	4	Mar. 1, 1938	Sept. 19, 1941
Oct. 28, 1941	19th General Assembly	4	Feb. 19, 1942	Sept. 12, 1945
Oct. 23, 1945	20th General Assembly	4	Mar. 14, 1946	Apr. 27, 1949
June 9, 1949	21st General Assembly	4	Mar. 21, 1950	Apr. 14, 1953
May 26, 1953	22nd General Assembly	[2]	Feb. 24, 1954	[2]

[1] The Ministries from 1933-54 were: 12th Ministry, sworn in Sept. 5, 1933, under the leadership of Hon. Angus L. Macdonald; 13th Ministry, sworn in July 10, 1940, under the leadership of Hon. A. S. MacMillan; 14th Ministry, sworn in Sept. 8, 1945, under the leadership of Hon. Angus L. Macdonald; 15th Ministry, sworn in Apr. 13, 1954, under the leadership of Hon. Harold Connolly. [2] Life of Legislature not expired at Mar. 31, 1954.

Fifteenth Ministry[1]

(Party standing at latest General Election, May 26, 1953: 22 Liberals, 12 Progressive Conservatives, 2 Co-operative Commonwealth Federation and one vacancy.)

NOTE.—See headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, Minister of Public Health and Welfare	Hon. HAROLD CONNOLLY	Feb. 24, 1941	Apr. 13, 1954
Minister of Highways and Public Works	Hon. A. W. MACKENZIE	Sept. 8, 1945	June 11, 1954
Minister without portfolio (in charge of administration of Nova Scotia Liquor Control Act)	Hon. GEOFFREY STEVENS	Apr. 4, 1946	Apr. 13, 1954
Attorney General and Minister of Mines and Labour	Hon. M. A. PATTERSON, Q.C.	June 10, 1947	Apr. 13, 1954
Provincial Secretary and Minister of Education	Hon. HENRY D. HICKS	Sept. 30, 1949	Apr. 13, 1954
Provincial Treasurer and Minister of Municipal Affairs	Hon. R. M. FIELDING, Q.C.	Dec. 7, 1949	Apr. 13, 1954
Minister of Trade and Industry	Hon. W. T. DAUPHINEE	Sept. 5, 1950	Apr. 13, 1954
Minister without portfolio (Chairman of the Nova Scotia Power Commission)	Hon. A. B. DEWOLFE	Sept. 5, 1950	Apr. 13, 1954
Minister of Agriculture and Marketing	Hon. COLIN H. CHISHOLM	June 11, 1954	June 11, 1954

[1] As at June 15, 1954.

Subsection 4.—New Brunswick

The Government of New Brunswick has a Lieutenant-Governor, an Executive Council and a House of Assembly.

The Honourable David Laurence MacLaren, the present Lieutenant-Governor, was commissioned to office Nov. 1, 1945. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 89.

The General Assembly elected Sept. 22, 1952, is the 42nd in New Brunswick's history and the 15th since Confederation. It has 52 members who are elected for a statutory term of five years.

The Premier receives $5,000 per annum in addition to the salary for any other portfolio he may hold. The salary of each Cabinet Minister is $5,000, the amount paid as indemnity to each Member of the House of Assembly is $2,000, plus an additional $1,000 allowance for expenses. The Leader of the Opposition receives an additional $2,000. An allowance of $1,000, in addition to the regular indemnity, is made to the Speaker.

17.—Legislatures and Premiers of New Brunswick, 1935-54, and Ministry as at Mar. 31, 1954

Legislatures, 1935-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 27, 1935	11th General Assembly	4	Mar. 5, 1936	Oct. 26, 1939
Nov. 20, 1939	12th General Assembly	5	Apr. 4, 1940	July 10, 1944
Aug. 28, 1944	13th General Assembly	4	Feb. 20, 1945	May 18, 1948
June 28, 1948	14th General Assembly	4	Mar. 8, 1949	July 16, 1952
Sept. 22, 1952	15th General Assembly	[2]	Feb. 12, 1953	[2]

[1] The Ministries from 1935-54 were: 20th Ministry, sworn in July 16, 1935, under the leadership of Hon. A. A. Dysart; 21st Ministry, sworn in Mar. 13, 1940, under the leadership of Hon. J. B. McNair; 22nd Ministry, sworn in Oct. 8, 1952, under the leadership of Hon. H. J. Flemming.

[2] Life of Legislature not expired at Mar. 31, 1954.

Twenty-Second Ministry

(Party standing at latest General Election, Sept. 22, 1952: 36 Conservatives, 16 Liberals.)

Note.—See headnote to Table **15**.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Minister of Public Works	Hon. Hugh John Flemming	Oct. 8, 1952	Oct. 8, 1952
Attorney General	Hon. William J. West	Oct. 8, 1952	Oct. 8, 1952
Provincial Secretary-Treasurer	Hon. D. D. Patterson	Oct. 8, 1952	Oct. 8, 1952
Minister of Agriculture	Hon. C. B. Sherwood	Oct. 8, 1952	Oct. 8, 1952
Minister of Health and Social Services	Hon. J. F. McInerney	Oct. 8, 1952	Oct. 8, 1952
Minister of Lands and Mines	Hon. N. B. Buchanan	Oct. 8, 1952	Oct. 8, 1952
Minister of Education and Municipal Affairs	Hon. Claude D. Taylor	Oct. 8, 1952	Oct. 8, 1952
Minister of Labour	Hon. Arthur E. Skaling	Oct. 8, 1952	Oct. 8, 1952
Minister of Industry and Development	Hon. J. Roger Pichette	Oct. 8, 1952	Oct. 8, 1952
Minister without portfolio and President of the Executive Council	Hon. T. Babbitt Parlee	Oct. 8, 1952	Oct. 8, 1952
Minister without portfolio and Chairman of the New Brunswick Electric Power Commission	Hon. Edgar Fournier	Oct. 8, 1952	Oct. 8, 1952

Subsection 5.—Quebec

The Government of Quebec consists of the Lieutenant-Governor, an Executive Council, and a bicameral legislature—the Legislative Council and the Legislative Assembly.

The Honourable Gaspard Fauteux, the present Lieutenant-Governor, was commissioned to office Oct. 3, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 90.

The Legislative Council has 24 members nominated for life by the Lieutenant-Governor in Council. The Legislative Assembly has 92 elected members and, like the Legislative Council, has the power to bring forward Bills relating to civil and administrative matters and to the amendment or repeal of laws that already exist. A Bill, to be approved by the Lieutenant-Governor, must have received the assent of both Houses. Only the Legislative Assembly can bring forward a Bill requiring the expenditure of public money. The maximum life of a Legislature is five years.

Salaries and allowances of the Premier, Members of the Executive Council, Legislative Council and Legislative Assembly are fixed according to R.S.Q. 1941, c. 4, as amended by 1-2 Eliz. II, as follows: all Members of the Legislative Assembly and Legislative Council receive $4,000 per annum as salary and $2,000 by way of allowances; in addition, the Premier receives $10,000 as salary, $4,000 allowances and $2,000 for lodging allowance; Ministers with portfolio an additional $8,000 as salary and $2,000 allowances; Ministers without portfolio an additional $3,000 salary and $2,000 allowances; the Leader of the Opposition in the Legislative Assembly an additional $6,000 salary, $2,000 allowances and $2,000 for lodging allowance; and the Leader of the Opposition in the Legislative Council an additional $5,000 salary and $2,000 allowances.

18.—Legislatures and Premiers of Quebec, 1935-54, the Ministry and Members of the Legislative Council as at Mar. 31, 1954

Legislatures, 1935-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Nov. 25, 1935	19th General Assembly	1	Mar. 24, 1936	June 11, 1936
Aug. 17, 1936	20th General Assembly	4	Oct. 7, 1936	Sept. 23, 1939
Oct. 25, 1939	21st General Assembly	5	Feb. 20, 1940	June 29, 1944
Aug. 8, 1944	22nd General Assembly	4	Feb. 7, 1945	June 9, 1948
July 28, 1948	23rd General Assembly	4	Jan. 19, 1949	May 28, 1952
July 16, 1952	24th General Assembly	[2]	Nov. 12, 1952	[2]

[1] The Ministries from 1935-54 were: 16th Ministry, sworn in July 8, 1920, under the leadership of Hon. L. A. Taschereau; 17th Ministry, sworn in June 11, 1936, under the leadership of Hon. A. Godbout; 18th Ministry, sworn in Aug. 24, 1936, under the leadership of Hon. Maurice L. Duplessis; 19th Ministry, sworn in Nov. 10, 1939, under the leadership of Hon. A. Godbout; 20th Ministry, sworn in Aug. 30, 1944, under the leadership of Hon. Maurice L. Duplessis.

[2] Life of Legislature not expired at Mar. 31, 1954.

Twentieth Ministry

(Party standing at latest General Election, July 16, 1952: 67 Union Nationale, 22 Liberals, 1 Independent and 2 vacancies.)

NOTE.—*See* headnote to Table **15**.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and President of the Executive Council	Hon. Maurice L. Duplessis	Aug. 24, 1936	Aug. 30, 1944
Minister of Finance	Hon. Onésime Gagnon	Oct. 6, 1936	Aug. 30, 1944
Minister of Lands and Forests and of Hydraulic Resources	Hon. John S. Bourque	Aug. 24, 1936	Aug. 30, 1944
Minister of Health	Hon. J. H. Albiny Paquette	Aug. 24, 1936	Aug. 30, 1944
Minister of Municipal Affairs	Hon. Yves Prévost	July 15, 1953	July 15, 1953
Minister of Colonization	Hon. J. D. Bégin	Aug. 30, 1944	Aug. 30, 1944
Minister without portfolio	Hon. Antonio Elie	Aug. 24, 1936	Aug. 30, 1944
Minister of Agriculture	Hon. Laurent Barré	Aug. 30, 1944	Aug. 30, 1944
Minister of Roads	Hon. Antonio Talbot	Aug. 30, 1944	Aug. 30, 1944
Minister of Labour	Hon. Antonio Barrette	Aug. 30, 1944	Aug. 30, 1944
Minister of Game and Fisheries	Hon. Camille Pouliot	Aug. 30, 1944	Aug. 30, 1944
Minister of Public Works	Hon. Roméo Lorrain	Aug. 30, 1944	Aug. 30, 1944
Minister of Social Welfare and of Youth	Hon. Jean-Paul Sauvé	Sept. 18, 1946	Sept. 18, 1946
Minister of Trade and Commerce	Hon. Paul Beaulieu	Aug. 30, 1944	Aug. 30, 1944
Provincial Secretary	Hon. Omer Côté	Aug. 30, 1944	Aug. 30, 1944
Minister of Mines	Hon. C. Daniel French	Dec. 15, 1948	Dec. 15, 1948
Solicitor General	Hon. Antoine Rivard	Dec. 15, 1948	Apr. 12, 1950
Minister without portfolio	Hon. Tancrède Labbé	Aug. 30, 1944	Aug. 30, 1944
Minister without portfolio	Hon. Arthur Leclerc	July 23, 1952	July 23, 1952
Minister without portfolio	Hon. Jacques Miquelon	July 23, 1952	July 23, 1952
Minister without portfolio	Hon. Wilfrid Labbé	July 23, 1952	July 23, 1952

18.—Legislatures and Premiers of Quebec, 1935-54, the Ministry and Members of the Legislative Council as at Mar. 31, 1954—concluded

Legislative Council

(According to seniority)

Name	Division	Date of Appointment
P. R. Du Tremblay	Sorel	Jan. 3, 1925
R. O. Grothé	De Salaberry	Dec. 23, 1927
Elisée Thériault	Kennebec	Apr. 23, 1929
Jacob Nicol	Bedford	Sept. 16, 1929
Victor Marchand	Rigaud	Apr. 15, 1932
Gustave Lemieux	Montarville	Dec. 2, 1932
Hector Laferté	Stadacona	July 23, 1934
Emile Moreau	Lauzon	June 6, 1935
Alphonse Raymond	De Lorimier	Aug. 28, 1936
J. L. Baribeau (Speaker)	Shawinigan	Jan. 14, 1938
Philippe Brais	Grandville	Feb. 16, 1940
Jules Brillant	Golfe	Jan. 14, 1942
Frank L. Connors	Mille Isles	Jan. 14, 1942
Robert R. Ness	Inkerman	Jan. 14, 1942
Wilfrid Bovey	Rougemont	Feb. 12, 1942
Félix Messier	De Lanaudière	Feb. 12, 1942
Edouard Asselin	Wellington	Jan. 23, 1946
Geo. B. Foster	Victoria	Aug. 22, 1946
Gérald Martineau	Les Laurentides	Aug. 22, 1946
J. Olier Renaud	Alma	Aug. 22, 1946
J. T. Larochelle	La Salle	Dec. 29, 1948
Patrice Tardif	De la Vallière	July 20, 1952
Joseph Boulanger	De la Durantaye	Oct. 8, 1952
Edouard Masson	Repentigny	Mar. 12, 1953

Subsection 6.—Ontario

The Government of Ontario consists of the Lieutenant-Governor, the Executive Council and the House of Assembly. The Honourable Louis O. Breithaupt, LL.D., the present Lieutenant-Governor of the Province, was commissioned to office Jan. 24, 1952. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 92.

The House of Assembly, the single-chamber Legislature of the Province, is composed of 90 members elected for a statutory term of five years on an adult-suffrage basis.

Besides the regular departments of government, the Niagara Parks Commission, the Ontario Municipal Board, the Hydro-Electric Power Commission of Ontario, the Ontario Northland Transportation Commission, the Liquor Control Board and the Liquor Licence Board have been created.

Under the provisions of the Legislative Assembly Act (R.S.O. 1950, c. 202, as amended 1952, c. 51), each Member of the Assembly is paid an annual indemnity of $2,600 and an allowance for expenses of $1,300. In addition, the Speaker receives a special indemnity at the annual rate of $3,000 and an expense allowance of $2,000; the Chairman of the Committee of the Whole a special indemnity at the annual rate of $1,000; and the Leader of the Opposition a special indemnity of $3,000 and an annual allowance of $2,000 for expenses. Each Member of the Cabinet receives the ordinary indemnity as a Member of the Legislature of $2,600 plus the $1,300 expense allowance in addition to his salary as a Minister of the Crown. The salary provided in the Executive Council Act for the Premier is $14,000 and for a Cabinet Minister $10,000.

19.—Legislatures and Premiers of Ontario, 1934-54, and Ministry as at Mar. 31, 1954

Legislatures, 1934-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 19, 1934	19th General Assembly	3	Feb. 20, 1935	Apr. 9, 1936
Oct. 6, 1937	20th General Assembly	8	Dec. 1, 1937	June 30, 1943
Aug. 4, 1943	21st General Assembly	2	Feb. 22, 1944	Mar. 24, 1945
June 4, 1945	22nd General Assembly	4	July 16, 1945	Apr. 27, 1948
June 7, 1948	23rd General Assembly	4	Feb. 10, 1949	Oct. 6, 1951
Nov. 22, 1951	24th General Assembly	[2]	Feb. 21, 1952	[2]

[1] The Ministries from 1934-54 were: 11th Ministry, sworn in July 10, 1934, under the leadership of Hon. M. F. Hepburn; 12th Ministry, sworn in Oct. 21, 1942, under the leadership of Hon. G. D. Conant; 13th Ministry, sworn in May 18, 1943, under the leadership of Hon. H. C. Nixon; 14th Ministry, sworn in Aug. 17, 1943, under the leadership of Hon. George A. Drew; 15th Ministry, sworn in Oct. 10, 1948, under the leadership of Hon. Thomas L. Kennedy; 16th Ministry, sworn in May 4, 1949, under the leadership of Hon. Leslie M. Frost. [2] Life of Legislature not expired at Mar. 31, 1954.

Sixteenth Ministry

(Party standing at latest General Election, Nov. 22, 1951: 79 Progressive Conservatives, 8 Liberals, 2 Co-operative Commonwealth Federation and 1 Labour-Progressive.)

Note.—*See* headnote to Table **15**.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council and Provincial Treasurer	Hon. Leslie M. Frost	Aug. 17, 1943	May 4, 1949
Minister of Highways	Hon. George H. Doucett	Aug. 17, 1943	Aug. 17, 1943
Attorney General	Hon. Dana H. Porter	May 8, 1944	May 4, 1949
Minister without portfolio	Hon. George H. Challies	July 31, 1931	Aug. 17, 1943
Minister of Municipal Affairs	Hon. George H. Dunbar	Aug. 17, 1943	Aug. 17, 1943
Minister of Labour	Hon. Charles Daley	Aug. 17, 1943	Aug. 17, 1943
Provincial Secretary and Registrar	Hon. G. Arthur Welsh	Jan. 7, 1945	May 4, 1949
Minister of Public Welfare	Hon. William A. Goodfellow	Jan. 7, 1945	Jan. 7, 1945
Minister of Public Works	Hon. William Griesinger	Apr. 15, 1946	Jan. 20, 1953
Minister without portfolio	Hon. Harold R. Scott	Nov. 28, 1946	June 3, 1952
Minister of Travel and Publicity	Hon. Louis P. Cecile	Oct. 19, 1948	Oct. 19, 1948
Minister of Lands and Forests	Hon. Welland S. Gemmell	May 4, 1949	June 3, 1952
Minister without portfolio	Hon. William E. Hamilton	July 15, 1949	Nov. 16, 1950
Minister of Health	Hon. Mackinnon Phillips	Aug. 8, 1950	Aug. 8, 1950
Minister of Reform Institutions	Hon. John W. Foote	Nov. 16, 1950	Nov. 16, 1950
Minister of Education	Hon. William J. Dunlop	Oct. 2, 1951	Oct. 2, 1951
Minister of Agriculture	Hon. Fletcher S. Thomas	Oct. 2, 1951	Jan. 20, 1953
Minister of Mines	Hon. Philip T. Kelly	June 3, 1952	June 3, 1952
Minister of Planning and Development	Hon. William K. Warrender	Jan. 20, 1953	Jan. 20, 1953

Subsection 7.—Manitoba

Besides its Lieutenant-Governor, Manitoba has a Provincial Executive composed of 10 members and a Legislative Assembly of 57 members, elected for a statutory term of five years. The Honourable John Stewart McDiarmid, the present Lieutenant-Governor of the Province, was commissioned to office Aug. 1, 1953. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 94.

The Premier of the Province is paid a salary of $10,000 per annum and each of the other Members of the Cabinet $8,000. Members of the Legislature are each paid an indemnity of $2,000 and an expense allowance of $1,000. The Leader of the Opposition is paid an additional amount of $2,500 and the Speaker of the Legislature an additional amount of $2,500.

20.—Legislatures and Premiers of Manitoba, 1932-54, and Ministry as at Mar. 31, 1954

Legislatures, 1932-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 16, 1932	19th General Assembly	4	Feb. 14, 1933	June 12, 1936
July 27, 1936	20th General Assembly	5	Feb. 18, 1937	Mar. 13, 1941
Apr. 22, 1941	21st General Assembly	5	Dec. 9, 1941	Sept. 8, 1945
Oct. 15, 1945	22nd General Assembly	4	Feb. 19, 1946	Sept. 29, 1949
Nov. 10, 1949	23rd General Assembly	7	Feb. 14, 1950	Apr. 23, 1953
June 8, 1953	24th General Assembly	1	Feb. 2, 1954	[2]

[1] The Ministries from 1932-54 were: 12th Ministry, sworn in Aug. 8, 1922, under the leadership of Hon. J. Bracken; 13th Ministry, sworn in Jan. 14, 1943, under the leadership of Hon. Stuart S. Garson; 14th Ministry, sworn in Nov. 13, 1948, under the leadership of Hon. D. L. Campbell. [2] Life of Legislature not expired at Mar. 31, 1954.

Fourteenth Ministry

(Party standing at latest General Election, June 8, 1953: 32 Liberal Progressives, 3 Independent Liberal Progressives, 12 Progressive Conservatives, 5 Co-operative Commonwealth Federation, 1 Labour Progressive, 2 Social Credit, 2 Independents.

Note.—*See* headnote to Table 15.

Office	Name	Date of First Appointment	Date of Present Appointment
President of the Council and Minister of Dominion-Provincial Relations	Hon. Douglas L. Campbell	Sept. 21, 1936	Nov. 13, 1948 Dec. 14, 1948
Attorney-General	Hon. Ivan Schultz	Sept. 21, 1936	Nov. 7, 1952
Minister of Public Works	Hon. William Morton	Nov. 22, 1939	Aug. 19, 1950
Minister of Mines and Natural Resources and Minister of Labour	Hon. Charles E. Greenlay	Feb. 15, 1946	Sept. 4, 1953 Dec. 14, 1948
Minister of Health and Public Welfare	Hon. Francis C. Bell	Dec. 14, 1948	Nov. 7, 1952
Minister of Education	Hon. Wallace C. Miller	Feb. 15, 1946	Aug. 16, 1950
Minister of Municipal Affairs and Provincial Secretary	Hon. Edmond Prefontaine	Dec. 1, 1951	Dec. 1, 1951 Sept. 4, 1953
Provincial Treasurer and Minister of Industry and Commerce	Hon. Ronald D. Turner	Dec. 1, 1951	Dec. 1, 1951 Sept. 4, 1953
Minister of Agriculture and Immigration	Hon. Ronald D. Robertson	Nov. 7, 1952	Nov. 7, 1952
Minister of Public Utilities	Hon. Charles L. Shuttleworth	Sept. 4, 1953	Sept. 4, 1953

Subsection 8.—Saskatchewan

The Government of the Province of Saskatchewan consists of a Lieutenant-Governor, an Executive Council, and a Legislative Assembly.

The Honourable W. J. Patterson, the present Lieutenant-Governor, was commissioned to office July 4, 1951. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 95.

The statutory number of members of the Legislative Assembly is 53, elected for a maximum term of five years.

As of Apr. 1, 1954, the Premier receives $8,500 and each Cabinet Minister $7,000 annually in addition to the sessional indemnity, while the Leader of the Opposition, the Speaker and the Deputy Speaker receive $4,000, $2,000 and $1,000, respectively. The sessional indemnity of a Member of the Legislature is $2,400 together with an expense allowance of $1,200. Members for the three northernmost constituencies of Cumberland, Athabasca and Meadow Lake each receive an additional $500.

21.—Legislatures and Premiers of Saskatchewan, 1934-54, and Ministry as at Mar. 31, 1954

Legislatures, 1934-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
June 19, 1934	8th General Assembly	4	Nov. 15, 1934	May 14, 1938
June 8, 1938	9th General Assembly	6	Jan. 19, 1939	May 10, 1944
June 15, 1944	10th General Assembly	5	Oct. 19, 1944	May 19, 1948
June 24, 1948	11th General Assembly	5	Feb. 10, 1949	May 7, 1952
June 11, 1952	12th General Assembly	[2]	Feb. 12, 1953	[2]

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[1] The Ministries from 1934-54 were: 6th Ministry, sworn in July 19, 1934, under the leadership of Hon. J. G. Gardiner; 7th Ministry, sworn in Nov. 1, 1935, under the leadership of Hon. W. J. Patterson; 8th Ministry, sworn in July 10, 1944, under the leadership of Hon. T. C. Douglas. [2] Life of Legislature not expired at Mar. 31, 1954.

Eighth Ministry

(Party standing at latest General Election, June 11, 1952: 42 Co-operative Commonwealth Federation, 11 Liberals.)

NOTE.—*See* headnote to Table **15**.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council and Minister of Co-operation and Co-operative Development	Hon. T. C. DOUGLAS	July 10, 1944	July 10, 1944 Nov. 14, 1949
Provincial Treasurer	Hon. C. M. FINES	July 10, 1944	July 10, 1944
Attorney General	Hon. J. W. CORMAN	July 10, 1944	July 10, 1944
Minister of Natural Resources, and Minister of Mineral Resources	Hon. J. H. BROCKELBANK	July 10, 1944	Aug. 4, 1948 Apr. 1, 1953
Minister of Highways and Transportation	Hon. J. T. DOUGLAS	July 10, 1944	July 10, 1944
Minister of Education	Hon. W. S. LLOYD	July 10, 1944	July 10, 1944
Minister of Social Welfare and Rehabilitation	Hon. J. H. STURDY	July 10, 1944	Aug. 4, 1948
Minister of Municipal Affairs	Hon. L. F. McINTOSH	July 10, 1944	Aug. 4, 1948
Minister of Labour	Hon. C. C. WILLIAMS	July 10, 1944	Aug. 4, 1948
Minister of Agriculture	Hon. I. C. NOLLET	Feb. 26, 1945	Feb. 26, 1945
Minister of Public Works	Hon. J. A. DARLING	Aug. 4, 1948	Aug. 4, 1948
Minister of Public Health	Hon. T. J. BENTLEY	Nov. 14, 1949	Nov. 14, 1949
Minister of Telephones	Hon. A. G. KUZIAK	Oct. 24, 1952	Oct. 24, 1952
Provincial Secretary	Hon. J. W. BURTON	Oct. 24, 1952	Oct. 24, 1952

Subsection 9.—Alberta

The Government of the Province of Alberta is composed of the Lieutenant-Governor, the Executive Council and the Legislative Assembly.

The Honourable John J. Bowlen, the present Lieutenant-Governor, was commissioned to office Feb. 1, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 96.

There are 61 members of the Legislative Assembly who are elected for a maximum period of five years.

The salary of the President of the Executive Council is $11,000 and of a Cabinet Minister $8,500. A special allowance of $2,500 is paid to the Leader of the Opposition. The sessional indemnity for each Member of the Legislative Assembly is $2,400 plus an expense allowance of $1,200.

22.—Legislatures and Premiers of Alberta, 1935-54, and Ministry as at Mar. 31, 1954

Legislatures, 1935-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Aug. 22, 1935	8th General Assembly	9	Feb. 6, 1936	Feb. 16, 1940
Mar. 21, 1940	9th General Assembly	4	Feb. 20, 1941	July 7, 1944
Aug. 8, 1944	10th General Assembly	5	Feb. 22, 1945	July 16, 1948
Aug. 17, 1948	11th General Assembly	5	Feb. 17, 1949	June 28, 1952
Aug. 5, 1952	12th General Assembly	[2]	Feb. 19, 1953	[2]

[1] The Ministries from 1935-54 were: 6th Ministry, sworn in July 10, 1934, under the leadership of Hon. R. G. Reid; 7th Ministry, sworn in Sept. 3, 1935, under the leadership of Hon. Wm. Aberhart; 8th Ministry, sworn in May 31, 1943, under the leadership of Hon. Ernest C. Manning. [2] Life of Legislature not expired at Mar. 31, 1954.

Eighth Ministry

(Party standing at latest General Election, Aug. 5, 1952: 52 Social Credit, 4 Liberals, 2 Progressive Conservatives, 2 Co-operative Commonwealth Federation, 1 Independent Social Credit.)

Note.—*See* headnote to Table **15.**

Office	Name	Date of First Appointment	Date of Present Appointment
Premier and Provincial Treasurer and Minister of Mines and Minerals	Hon. Ernest C. Manning	Sept. 3, 1935	May 31, 1943 Sept. 16, 1952
Attorney General	Hon. Lucien Maynard	May 12, 1936	June 1, 1943
Minister of Education	Hon. Anders O. Aalborg	Sept. 9, 1952	Sept. 9, 1952
Minister of Lands and Forests	Hon. Ivan Casey	Sept. 9, 1952	Sept. 9, 1952
Minister of Public Works	Hon. Alfred J. Hooke	Sept. 9, 1952	Sept. 9, 1952
Minister of Health	Hon. W. W. Cross	Jan. 5, 1954	Jan. 5, 1954
Minister of Public Welfare	Hon. R. D. Jorgenson	Jan. 3, 1953	Jan. 3, 1953
Minister of Economic Affairs	Hon. Alfred J. Hooke	Apr. 20, 1945	Apr. 20, 1945
Minister of Municipal Affairs and Provincial Secretary	Hon. C. E. Gerhart	June 1, 1943	May 8, 1948
Minister of Agriculture	Hon. Leonard C. Halmrast	Jan. 3, 1953	Jan. 5, 1954
Minister of Industries and Labour	Hon. N. A. Willmore	Nov. 10, 1953	Nov. 10, 1953
Minister of Railways and Telephones and Minister of Highways	Hon. Gordon E. Taylor	Dec. 27, 1950	Dec. 27, 1950 May 1, 1951

Subsection 10.—British Columbia

The Government of British Columbia has a Lieutenant-Governor, an Executive Council and a Legislative Assembly.

Colonel the Honourable Clarence Wallace, the present Lieutenant-Governor of the Province, was commissioned to office Oct. 1, 1950. Lieutenant-Governors since Confederation are cited in the 1951 Year Book, p. 98.

The Legislative Assembly, elected for a statutory term of five years, has 48 members.

Members of the Executive Council and the Legislative Assembly each receive a sessional allowance of $2,000 and $1,000 for expenses. In addition, the Premier receives a salary of $9,000 and each Member of the Executive Council $7,500. The Leader of the Opposition has a special allowance of $2,000 and the Speaker and Deputy Speaker receive allowances of $1,800 and $500, respectively.

23.—Legislatures and Premiers of British Columbia, 1933-54, and Ministry as at Mar. 31, 1954

Legislatures, 1933-54[1]

Date of Election	Legislature	Number of Sessions	Date of First Opening	Date of Dissolution
Nov. 2, 1933[2]	18th General Assembly	4	Feb. 20, 1934	Apr. 15, 1937
June 1, 1937	19th General Assembly	5	Oct. 26, 1937	July 22, 1941
Oct. 21, 1941	20th General Assembly	4	Dec. 4, 1941	Aug. 31, 1945
Oct. 25, 1945	21st General Assembly	5	Feb. 21, 1946	Apr. 16, 1949
June 15, 1949	22nd General Assembly	4	Feb. 14, 1950	Apr. 10, 1952
June 12, 1952	23rd General Assembly	1	Feb. 3, 1953	Mar. 27, 1953
June 9, 1953	24th General Assembly	[3]	Sept. 15, 1953	[3]

[1] The Ministries from 1933-54 were: 22nd Ministry, sworn in Nov. 15, 1933, under the leadership of Hon. T. D. Pattullo; 23rd Ministry, sworn in Dec. 10, 1941, under the leadership of Hon. John Hart; 24th Ministry, sworn in Dec. 29, 1947, under the leadership of Hon. B. I. Johnson; 25th Ministry, sworn in Aug. 1, 1952, under the leadership of Hon. W. A. C. Bennett. [2] Owing to the death of a candidate, polling day was delayed in the Electoral Districts of Vancouver Centre and Victoria City until Nov. 27, 1933. [3] Life of Legislature not expired at Mar. 31, 1954.

Twenty-Fifth Ministry

(Party standing at latest General Election, June 9, 1953: 28 Social Credit, 14 Co-operative Commonwealth Federation, 4 Liberals, 1 Progressive Conservative, 1 Labour.)

NOTE.—See headnote to Table **15**.

Office	Name	Date of First Appointment	Date of Present Appointment
Premier, President of the Council, and Minister of Finance	Hon. WILLIAM ANDREW CECIL BENNETT	Aug. 1, 1952	Aug. 1, 1952
Provincial Secretary and Minister of Municipal Affairs	Hon. WESLEY DREWETT BLACK	Aug. 1, 1952	Aug. 1, 1952
Attorney-General	Hon. ROBERT WILLIAM BONNER	Aug. 1, 1952	Aug. 1, 1952
Minister of Lands and Forests and Minister of Mines	Hon. ROBERT EDWARD SOMMERS	Aug. 1, 1952	Aug. 1, 1952
Minister of Agriculture	Hon. WILLIAM KENNETH KIERNAN	Aug. 1, 1952	Aug. 1, 1952
Minister of Public Works	Hon. PHILIP ARTHUR GAGLARDI	Aug. 1, 1952	Aug. 1, 1952
Minister of Railways, Minister of Trade and Industry, and Minister of Fisheries	Hon. WILLIAM RALPH TALBOT CHETWYND	Aug. 1, 1952	Aug. 1, 1952
Minister of Labour	Hon. LYLE WICKS	Aug. 1, 1952	Aug. 1, 1952
Minister of Education	Hon. RAY GILLIS WILLISTON	Apr. 14, 1954	Apr. 14, 1954
Minister of Health and Welfare	Hon. ERIC CHARLES FITZGERALD MARTIN	Aug. 1, 1952	Aug. 1, 1952

Subsection 11.—Yukon and Northwest Territories

Yukon Territory.—The Yukon was created a separate Territory in June 1898. Provision is made for a local Government composed of a Chief Executive, styled Commissioner, and an elective Legislative Council of five members with a three-year tenure of office. The Commissioner administers the Government under instructions from the Governor in Council or the Minister of Northern Affairs and National Resources. The Commissioner in Council has power to make ordinances dealing with the imposition of local taxes, sale of liquor, preservation of game, establishment of territorial offices, maintenance of prisons and municipal institutions, issue of licences, incorporation of companies, solemnization of marriage, property and civil rights, administration of justice, and generally all matters of a local nature in the Territory. The seat of local government is at Whitehorse, Yukon Territory.

TERRITORIAL COUNCIL

(Five members elected 1952, for three years)

Dawson	V. C. Mellor	Whitehorse East	J. L. Phelps
Mayo	A. F. Berry	Whitehorse West	F. D. Locke
Carmacks	A. R. Hayes		

TERRITORIAL OFFICIALS

Commissioner (Whitehorse)	W. G. Brown
Superintendent of Works and Buildings	H. Tait
Registrar of Vital Statistics	W. D. Robertson
Legal Adviser	F. G. Smith

The Director of the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, is directly responsible for the general administration of the Territory under the Yukon Act (R.S.C. 1952, c. 298), and that Department has three lands and mining officials stationed in the Territory. Other Departments of the Federal Government, including Justice, National Revenue, Transport, Post Office, etc., also maintain officials in the Yukon Territory.*

Northwest Territories.—The Northwest Territories as reconstituted on Sept. 1, 1905, comprise:—

(1) all that part of Canada north of the Sixtieth Parallel of North Latitude, except the portions thereof within the Yukon Territory and the Provinces of Quebec and Newfoundland, and

(2) the islands in Hudson Bay, James Bay and Ungava Bay, except those islands within the Provinces of Manitoba, Ontario and Quebec.

For administrative purposes, the Territories were divided into the provisional districts of Mackenzie, Keewatin and Franklin by Order in Council of Mar. 16, 1918. The Northwest Territories Act, 1905, as amended, provides for the Government of the Territories by a Commissioner (who is Deputy Minister of the Department of Northern Affairs and National Resources) under instructions given from time to time by the Governor in Council or the Minister of Northern Affairs and National Resources. Provision is made in the Northwest Territories Act (S.C. 1953-54, c. 8) for a Council of nine members, four of whom shall be elected in the Mackenzie River district and five appointed by the Governor in Council. The Commissioner in Council has power to make ordinances for the Government of the Territories relating to subjects designated by the Governor in Council, subject to any Act of the Parliament of Canada applying to the Territories, respecting such matters as direct taxation within the Territories to raise revenue, establishment and tenure of territorial offices, maintenance of municipal institutions, licences, administration of civil justice, education, public health and generally all matters of a local nature. The administration of the Territories under the Northwest Territories Act and the ordinances passed by the Commissioner in Council is carried on by the Northern Administration and Lands Branch of the Department of Northern Affairs and

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* Further information on officials of various Federal Government Departments serving the Yukon Territory may be obtained from the Director, Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

National Resources. A federal Administrative Officer serves at each of the following Territorial centres: Fort Smith, Aklavik, Hay River and Yellowknife. The seat of government is at Ottawa.

COUNCIL OF THE NORTHWEST TERRITORIES

(AS AT SEPT. 7, 1954)

Commissioner	R. G. ROBERTSON
Deputy Commissioner	F. J. G. CUNNINGHAM
Members of the Council—*	
Appointed	LOUIS DE LA C. AUDETTE, W. I. CLEMENTS, JEAN BOUCHER, F. J. G. CUNNINGHAM, L. H. NICHOLSON
Elected	FRANK CARMICHAEL, J. W. GOODALL, ROBERT C. PORRITT, JOHN PARKER
Officers of the Council—	
Secretary	R. BOUCHARD
Legal Adviser	WM. NASON

Section 3.—Municipal Government†

The earliest local government in Canada was carried out by the seigneurs of New France who bore, along with military command and the administration of justice, the responsibilities of appointing justices of the peace and clerks of roads. Some of these officers were soon replaced by a 'syndic' elected by the people, the first in 1644, though a mayor and two aldermen had held office briefly in the city of Quebec in 1643. When the syndics fell into disuse, their powers were delegated by the Governor to officials. The City of Quebec was incorporated in 1832, and the system of local government for the province decreed in 1840 was later remodelled by Acts of 1845, 1847, 1850 and 1860.

In the Atlantic Provinces, Saint John, N.B., had attained the distinction of becoming Canada's first incorporated city in 1785. Incorporation of Halifax, N.S., came in 1841 and Charlottetown, P.E.I., in 1855. In Newfoundland, St. John's was created a town in 1888.

The Ontario Parish and Town Officers Act of 1793 provided for an annual meeting in a parish or township to appoint local officers responsible to Parliament and the courts, but the meetings had no law-making powers. Brockville, in 1832, gained from the Governor in Council some local powers that had previously been exercised through the courts. In 1834, York was incorporated as the self-governing City of Toronto. The Municipal Act of 1849 became the foundation of the local government in Ontario and later provided a model for the western provinces. Subsequently, Acts have been passed in all provinces governing aspects of municipal incorporation, powers and duties. Constitutional provision that jurisdiction over municipal affairs would rest with the provinces has resulted, quite naturally, in dissimilarity in the organization of local government across the country. This stems not only from the difference in beginnings and subsequent independent growth in each province, but also from variations in requirements arising out of geographical and population differences.

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* Following dissolution of the Council on June 30, 1954, the five appointed members were reappointed on July 1, 1954. General elections for the four elected members were held on Sept. 7, 1954.

† Prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

The situation remains in a state of flux, with constant amendment of provincial Acts and charters in an attempt to solve old problems and to meet new ones. Just as the call for new and additional services has enlarged the scope of federal and provincial activities, the municipalities have had to assume responsibilities unheard of a few decades ago, or considered beyond their sphere of activity. As a result, amendments to Acts have varied from those enlarging the powers and the boundaries of municipalities, to those establishing closer provincial control and greater financial aid.

An outline of municipal organization at the end of 1953 in each of the provinces of Canada is given in the following paragraphs.*

Newfoundland.—Newfoundland has only one city, St. John's. The remainder of the population is dispersed in small settlements along the coast, and only since 1937 have a few of the larger of these been set up individually as towns with local councils or, where two or three are close together, as rural districts (43 in 1953). These latter are not rural municipalities but merely towns consisting of two or more settlements. Local affairs in the remainder of the Province are administered by the Provincial Government. In 1949, the Local Government Act was passed to facilitate incorporations. There are now thirty towns and two rural districts incorporated under the Act while there are eight local government communities with lesser powers of government.

Prince Edward Island.—The Province has one city, Charlottetown, and seven towns all incorporated by special Acts. They comprise less than one-half of one per cent of the area of the Island and only about a quarter of its population. The Village Service Act, 1951, provides for the incorporation of villages. The remaining area of the Province is not organized municipally, the three counties being provincial administrative units only.

Nova Scotia.—Municipal organization in Nova Scotia covers the whole of the Province. The two cities, Halifax and Sydney, operate under special charters; the latter is also governed by certain special legislation. Forty towns operate under the Town Incorporation Act but there are no municipalities incorporated as villages. Cities and towns are independent of counties. The rural area is divided into 18 counties which, in themselves, do not represent units of local government. However, 12 of these counties each comprise one municipality, and the other six comprise two municipalities each, making a total of 24 rural municipalities.

New Brunswick.—The Province is divided into 15 counties which are incorporated municipalities and have direct powers of local self-government in the rural areas. In effect, therefore, they are rural municipalities. In most cases certain of their powers apply in both rural and urban municipalities. The five cities—Saint John, Fredericton, Moncton, Edmundston and Lancaster—have special charters, and the 19 towns operate under the Towns Incorporation Act. There are three villages and 37 local improvement district areas within the counties but outside the cities, towns and villages; these have been incorporated for the provision of limited municipal services.

Quebec.—Municipal divisions in Quebec embrace the more thickly settled areas comprising about one-third of the Province, the remainder being governed by the Province as 'territories'. The organized area is divided into 76 county municipalities, which are divided again into local municipalities under the Municipal Code and designated as village, township or parish municipalities or simply as municipalities. The counties, as such, have no direct powers of taxation. Funds to finance the services falling within their jurisdiction are provided by the municipalities forming part thereof. Parts of some counties are not yet organized into incorporated units of local government, being in outlying districts with little or no population. There are 337 villages and 1,111 townships and parishes. A small number of these are independent of the counties in which they are located. Of the 35 cities, a few have special charters. The remainder, along with the 134 towns, are governed by the Cities and Towns Act and numerous special Acts.

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* Municipalities are summarized by type of organization on p. 90.

Ontario.—Slightly more than one-tenth of the area of Ontario is municipally organized, the remainder being governed entirely by the Provincial Government. The older section of the Province is divided into 43 counties, five of which are united with others for administrative purposes. Although an incorporated municipality, each county is comprised of the towns, villages and townships situated within its borders, which provide its revenue. There are 29 cities, 152 towns, 157 villages, 573 townships and 15 improvement districts. Some of each are located in the northern districts of the Province, which are not organized into counties.

Manitoba.—Only the southern and settled section of Manitoba, comprising less than one-eighth of the area, is organized for local self-government. As in the other three western provinces, there is no county organization and all municipalities are independent, except of provincial control. There are four cities, three with special charters and one governed by a number of special Acts. General Acts govern the 33 towns, 39 villages, 109 rural municipalities and five suburban municipalities. An Act of 1944 (amended January 1945) authorizes organization of local government districts in unorganized or disorganized (formerly organized but later unorganized) territory, and 12 such districts have been set up.

Saskatchewan.—All municipalities in Saskatchewan derive their powers from general Acts that are designated with the name of the type of municipality. There are eight cities, 96 towns, 383 villages and 296 rural municipalities. The area so organized consists of most of the southern two-fifths of the Province. The remainder of this portion is administered for local purposes by the Province in unincorporated local improvement districts. The northern three-fifths is sparsely populated and without local government, though some municipal services are provided by the Province through operation of the Northern Administrative Area.

Alberta.—In Alberta there are cities, towns, villages and rural municipalities known as municipal districts. The latter three classes come under general Acts. Until 1951 each of the seven cities had its own charter, but these have been superseded by the City Act of 1951. There are 72 towns, 138 villages and 57 municipal districts, but less than one-fifth of the Province is so organized. There are also some unincorporated improvement districts administered by the Province in less densely settled areas. Four county municipalities have been set up. These are not counties as they exist in Ontario but municipalities in which the council administers education and municipal hospitals. They are included with the municipal districts mentioned above and in Table **24** on p. 90.

British Columbia.—Less than 0·5 p.c. of the area of British Columbia is organized into municipalities. Additional small areas have sufficient population to require administration of local activities by the Provincial Government. There are 35 cities, 49 villages and 29 districts. The latter are chiefly rural municipalities, except for those adjacent to the principal cities of Victoria and Vancouver, which are largely urban in character. It should be emphasized, however, that the application of the name "city" is somewhat different from the commonly accepted meaning in that several of them have populations of less than 1,000 and perhaps one-half or more would not normally be incorporated as cities in another province.

Yukon and Northwest Territories.—There are two cities and one town in the Yukon Territory and two local administrative districts in the Northwest Territories, all of which provide some municipal services to their local areas. These are not shown in Table 24.

24.—Municipalities, by Official Designation[1] and by Statistical Classification,[2] by Province, as at Dec. 31, 1953

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	OFFICIAL DESIGNATION[1]										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Cities	1	1	2	5	35	29	4	8	7	35	127
Towns	40[3]	7	40	19	134	152	33	96	72	—	593
Villages	—	—	—	3	337	157	39	383	138	49	1,106
Totals, Urban	41	8	42	27	506	338	76	487	217	84	1,826
Rural[4]	3	—	24	15	1,111	588[5]	114[6]	296[7]	57[8]	29	2,237
Totals, Local Municipalities	44	8	66	42[9]	1,617	926	190	783	274	113	4,063
Quebec and Ontario counties	...	...	...	...	76	38	...	...	...	...	114
Totals, Incorporated Municipalities	**44**	**8**	**66**	**42**	**1,693**	**964**	**190**	**783**	**274**	**113**	**4,177**
	STATISTICAL CLASSIFICATION[2]										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Municipalities in Metropolitan Areas—[10]											
Urban	1	—	2	2	54	24	5	—	6	6	100
Rural	—	—	1	2	25	17	9	—	4	11	69
Totals, Metropolitan Areas	1	—	3	4	79	41	14	—	10	17	169
Other Urban	40	8	40	25	452	314	71	487	211	78	1,726
Other Rural—											
Semi-urban	—	—	—	—	—	11	—	—	—	—	11
Other	3	—	23	13	1,086	560	105	296	53	18	2,157
Totals, Other Rural	3	—	23	13	1,086	571	105	296	53	18	2,168
Totals, Other Urban & Rural	43	8	63	38	1,538	885	176	783	264	96	3,894
Quebec and Ontario counties	...	...	...	...	76	38	...	...	...	...	114
Totals, Incorporated Municipalities	**44**	**8**	**66**	**42**	**1,693**	**964**	**190**	**783**	**274**	**113**	**4,177**

[1] This section of the table groups the municipalities according to their official nomenclature which is roughly indicative of size and nature. *See* footnote 4.

[2] This section of the table groups the municipalities under the classification devised by the Dominion Provincial Conferences on Municipal Statistics, the classification being designed to bring municipalities into comparable groups for statistical presentation.

[3] Includes eight local government communities.

[4] Rural municipalities are designated by different names in the different provinces.

[5] Includes 15 local improvement districts.

[6] Includes five units of self-government known as "suburban municipalities". Does not include local government districts.

[7] Excludes 20 improvement districts.

[8] Includes four county municipalities. Excludes 55 improvement districts.

[9] Excludes 37 local improvement districts.

[10] Municipalities shown wholly or partly in metropolitan areas by the 1951 Census of Canada.

Section 4.—Federal and Provincial Royal Commissions

Federal Royal Commissions.*—Royal Commissions established from Apr. 1, 1952, to Mar. 31, 1954, are reported here, in continuance of those previously reported in the Year Books beginning with the 1940 edition at pp. 1108-1110:—

Royal Commission appointed to inquire into claims *re* World War II. Oct. 23, 1952. *Commissioner:* Hon. T. A. Campbell.

Royal Commission appointed for the holding of inquiries regarding the revocation of Canadian Citizenship Certificates. July 17, 1953. *Commissioners:* His Hon. Wilfred Slater Lane, Hon. Paul Ste-Marie, *et al.*

Royal Commission appointed to inquire into whether the Criminal Law of Canada relating to the defence of insanity should be amended. Mar. 2, 1954. *Commissioners:* Hon. James C. McRuer, Dr. Gustave Desrochers, *et al.*

Royal Commission to inquire into whether the Criminal Law relating to criminal sexual psychopaths should be amended. Mar. 25, 1954. *Commissioner:* Hon. James C. McRuer, *et al.*

Provincial Royal Commissions.—Only those Royal Commissions established in 1953-54 are reported here, this list being in continuance of those in previous Year Books beginning with the 1948-49 edition, pp. 1222-1223:—

Newfoundland.—Royal Commission appointed to inquire into and report upon the agricultural resources of the Province. June 15, 1953. *Commissioners:* A. M. Shaw, W. M. Drummond and P. J. Murray.

Royal Commission appointed to inquire into the forestry resources of the Province. Feb. 22, 1954. *Commissioners:* Major General H. Kennedy, D. R. Cameron and R. C. Goodyear.

Royal Commission appointed under the Public Enquiries Act to prepare a comprehensive review of the financial position of the Province; also to recommend the form and scale of additional financial assistance for the continuance of public services at the levels and standards reached subsequent to the date of Union. Jan. 19, 1954. *Commissioners:* Hon. Philip J. Lewis, Hon. Calvert C. Pratt, Philip Gruchy, Gerald S. Doyle and Albert Perlin.

New Brunswick.—Royal Commission appointed to inquire into and concerning all matters proper for the disposition of government grants made available to and administered through several school administrative units of the Province; and the relative tax-paying ability of the Province in comparison with that of the other provinces of Canada. Sept. 11, 1953. *Chairman:* Dr. W. H. MacKenzie. *Commissioners:* Julianne Levesque and R. Donald Stewart.

Manitoba.—Royal Commission appointed to inquire into commercial fishing. Aug. 15, 1953. *Chairman:* M. N. Hryhorczuk.

The Industrial Commission was appointed Aug. 26, 1953, and the Highway Safety Commission was appointed Sept. 16, 1953. No Chairman was named in the Order in Council authorizing these Commissions.

British Columbia.—Royal Commission appointed to inquire into matters relating to the destruction, by slides, of a portion of the power-house of the Whatshan Development. Sept. 4, 1953. *Commissioner:* Hon. Mr. Justice J. V. Clyne. Report printed, 50 pp.

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* Commissions constituted under Part I of the Federal Inquiries Act.

PART III.—ADMINISTRATIVE FUNCTIONS OF THE FEDERAL GOVERNMENT

Section 1.—Departments, Boards, Commissions, etc.

The following paragraphs indicate the functions of the various departments of government and the special boards and commissions in connection with the work of government.

Though it is not possible, owing to the limitations of space, to enumerate in this Section the details of each service or the divisions or sections of all the departments, the main branches are given along with those services that differ in some quality from the larger class of subjects handled by a department. The work of many of these departments is given in detail in later Chapters of this volume. The Index will be useful in locating required information.

Department of Agriculture.—This Department was established in 1867 (30 Vict., c. 53) and conducts the concerns of all phases of agriculture. Research and experimentation are carried out by the Science Service and the Experimental Farms Service; the maintenance of standards and protection of products by the Production Service and Marketing Service; reclamation and development by the Prairie Farm Rehabilitation Administration and the Maritime Marshland Rehabilitation Administration; while security and price stability policies are administered under the Prairie Farm Assistance Administration and the Agricultural Prices Support Board. The results of work in these various fields and information on the policies of the Department in general are made available to the public through the Information Service.

Auditor General's Office.—The Office of Auditor General is authorized under the Financial Administration Act (R.S.C. 1952, c. 116). Duties include the auditing of accounts of expenditures and revenue of Canada, and of Crown companies and other instrumentalities, and the reporting thereon to Parliament.

The Department of Citizenship and Immigration.—This Department came into existence on Jan. 18, 1950, under the Minister of Citizenship and Immigration. It comprises the Canadian Citizenship Branch, the Canadian Citizenship Registration Branch, the Immigration Branch and the Indian Affairs Branch.

The Canadian Citizenship Branch assists governmental and non-governmental agencies engaged or interested in facilitating the adjustment and integration of newcomers and in making Canadians conscious of their privileges and responsibilities as citizens.

The Canadian Citizenship Registration Branch administers the Canadian Citizenship Act and is the custodian of all records under that Act and all Naturalization Acts previously in force.

The Immigration Branch administers the Immigration Act and Regulations and is responsible for the selection, examination and transportation of immigrants, the exclusion or deportation of undesirables and the settlement or establishment of immigrants in Canada.

The activities of the Indian Affairs Branch include management of all Indian affairs. Its organization consists of a headquarters office at Ottawa, a regional supervisory staff, and 87 local agencies in the field.

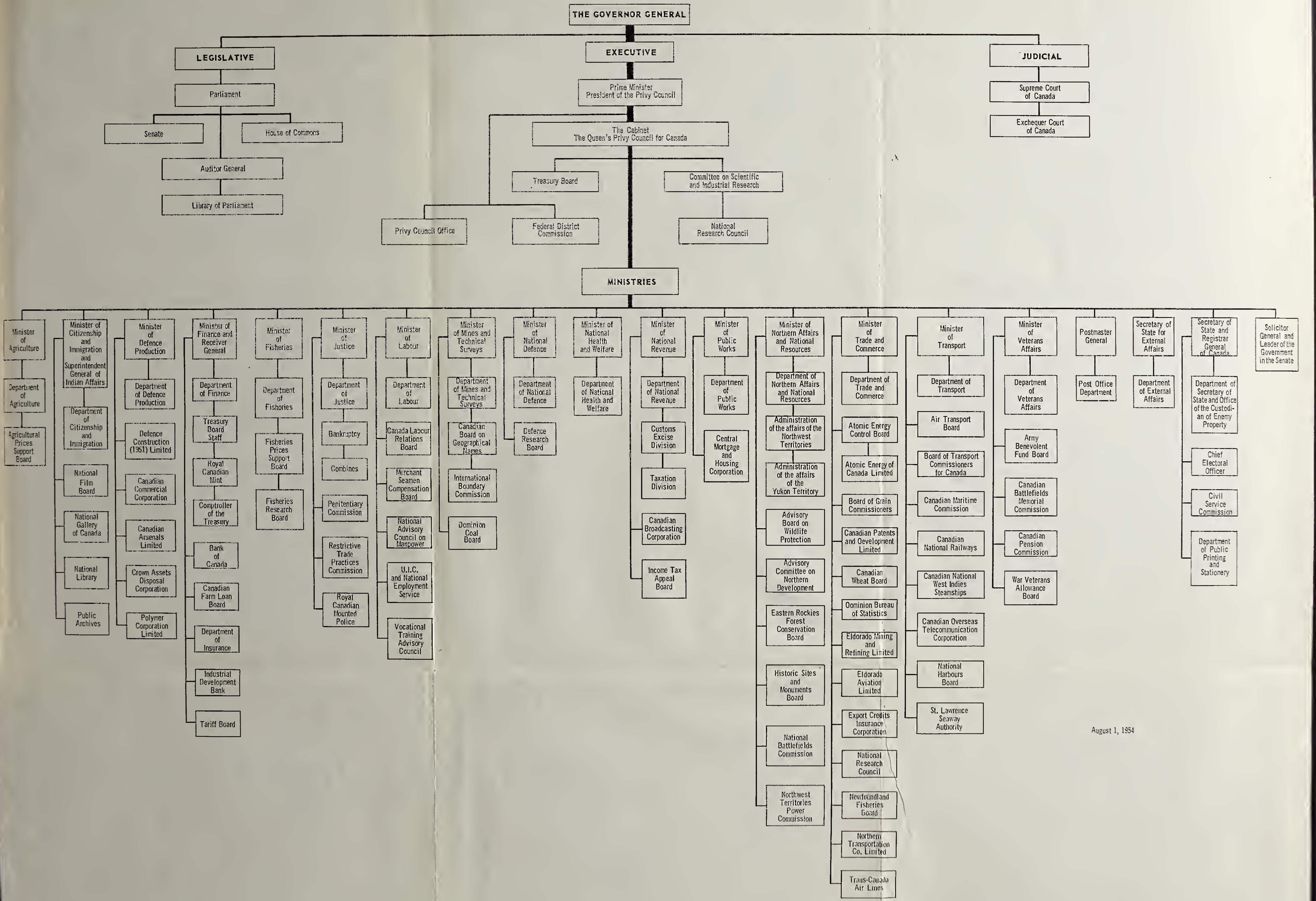
The Minister of Citizenship and Immigration is responsible to Parliament for the National Film Board, the National Library, the Public Archives, and for the National Gallery of Canada which is governed by a Board of Trustees.

The Civil Service Commission.—The Civil Service Commission of Canada dates from the Civil Service Act of 1908. Under this Act the Commission was given the responsibility of applying, as far as possible, the principle of appointment by merit in filling permanent positions within departmental headquarters positions at Ottawa, termed the "inside service".

The Civil Service Act of 1918 extended the competitive system of appointments to cover the outside as well as the inside service and temporary as well as permanent appointments. It made the Commission responsible for establishing a system of organization and classification that would secure uniformity in the staffing of the various departments and in the salaries paid for work of equal levels of difficulty and responsibility.

The jurisdiction of the Commission now extends to all departments of the Government and to a large number of boards and commissions, exclusive of Crown corporations.

GOVERNMENT OF CANADA


THE GOVERNOR GENERAL
LEGISLATIVE
Parliament
Senate
House of Commons
Auditor General
Library of Parliament
EXECUTIVE
Prime Minister President of the Privy Council
The Cabinet The Queen's Privy Council for Canada
Treasury Board
Committee on Scientific and Industrial Research
Privy Council Office
Federal District Commission
National Research Council
JUDICIAL
Supreme Court of Canada
Exchequer Court of Canada
MINISTRIES
Minister of Agriculture
Department of Agriculture
Agricultural Prices Support Board
Minister of Citizenship and Immigration and Superintendent General of Indian Affairs
Department of Citizenship and Immigration
National Film Board
National Gallery of Canada
National Library
Public Archives
Minister of Defence Production
Department of Defence Production
Defence Construction (1951) Limited
Canadian Commercial Corporation
Canadian Arsenals Limited
Crown Assets Disposal Corporation
Polymer Corporation Limited
Minister of Finance and Receiver General
Department of Finance
Treasury Board Staff
Royal Canadian Mint
Comptroller of the Treasury
Bank of Canada
Canadian Farm Loan Board
Department of Insurance
Industrial Development Bank
Tariff Board
Minister of Fisheries
Department of Fisheries
Fisheries Prices Support Board
Fisheries Research Board
Minister of Justice
Department of Justice
Bankruptcy
Combines
Penitentiary Commission
Restrictive Trade Practices Commission
Royal Canadian Mounted Police
Minister of Labour
Department of Labour
Canada Labour Relations Board
Merchant Seamen Compensation Board
National Advisory Council on Manpower
U.I.C. and National Employment Service
Vocational Training Advisory Council
Minister of Mines and Technical Surveys
Department of Mines and Technical Surveys
Canadian Board on Geographical Names
International Boundary Commission
Dominion Coal Board
Minister of National Defence
Department of National Defence
Defence Research Board
Minister of National Health and Welfare
Department of National Health and Welfare
Minister of National Revenue
Department of National Revenue
Customs Excise Division
Taxation Division
Canadian Broadcasting Corporation
Income Tax Appeal Board
Minister of Public Works
Department of Public Works
Central Mortgage and Housing Corporation
Minister of Northern Affairs and National Resources
Department of Northern Affairs and National Resources
Administration of the affairs of the Northwest Territories
Administration of the affairs of the Yukon Territory
Advisory Board on Wildlife Protection
Advisory Committee on Northern Development
Eastern Rockies Forest Conservation Board
Historic Sites and Monuments Board
National Battlefields Commission
Northwest Territories Power Commission
Minister of Trade and Commerce
Department of Trade and Commerce
Atomic Energy Control Board
Atomic Energy of Canada Limited
Board of Grain Commissioners
Canadian Patents and Development Limited
Canadian Wheat Board
Dominion Bureau of Statistics
Eldorado Mining and Refining Limited
Eldorado Aviation Limited
Export Credits Insurance Corporation
National Research Council
Newfoundland Fisheries Board
Northern Transportation Co. Limited
Trans-Canada Air Lines
Minister of Transport
Department of Transport
Air Transport Board
Board of Transport Commissioners for Canada
Canadian Maritime Commission
Canadian National Railways
Canadian National West Indies Steamships
Canadian Overseas Telecommunication Corporation
National Harbours Board
St. Lawrence Seaway Authority
Minister of Veterans Affairs
Department of Veterans Affairs
Army Benevolent Fund Board
Canadian Battlefields Memorial Commission
Canadian Pension Commission
War Veterans Allowance Board
Postmaster General
Post Office Department
Secretary of State for External Affairs
Department of External Affairs
Secretary of State and Registrar General of Canada
Department of Secretary of State and Office of the Custodian of Enemy Property
Chief Electoral Officer
Civil Service Commission
Department of Public Printing and Stationery
Solicitor General and Leader of the Government in the Senate

August 1, 1954

The Civil Service Commission, which is under the jurisdiction of the Secretary of State, consists of three members, one of whom serves as Chairman. Each member of the Commission is appointed by the Governor in Council for a term of 10 years, and each has the rank and standing of a Deputy Minister. The Commission has a staff of approximately 580 persons working under its direction and located in the headquarters office at Ottawa and in district offices at St. John's, N'f'ld., Halifax, N.S., Saint John, N.B., Montreal, Que., Toronto, Ont., Winnipeg, Man., Regina, Sask., Edmonton, Alta., and Vancouver, B.C.

The Department of Defence Production.—The Department of Defence Production was established on Apr. 1, 1951, under the provisions of the Defence Production Act. Under this Act the Minister is given, with certain exceptions, exclusive authority to buy defence supplies and construct defence projects required by the Department of National Defence. The Minister may, if authorized by the Governor in Council, undertake for an associated government anything he may undertake for the Canadian Government. In addition, all powers, duties and functions that theretofore were vested in the Minister of Trade and Commerce under any contract, agreement, lease or other writing entered into pursuant to the Department of Munitions and Supply Act, 1939, or the Defence Supplies Act, 1950, are vested in the Minister of Defence Production.

Broadly, the Department's functions are to procure military goods, to construct defence installations and to organize industry for defence as required, on behalf of the Department of National Defence, other government departments, and associated governments; to promote the expansion of defence production facilities and the development of defence supporting industries, particularly of strategic resources important for the defence of Canada and its allies; and to ensure adequate supplies of essential materials and services for defence requirements. The main units of the Department are: the Ammunition Branch, the Aircraft Branch, the Electronics Branch, the General Purchasing Branch, the Guns Branch, the Machine Tools Branch, and the Shipbuilding Branch. In addition, there are various administrative or service units including Administration, Comptroller's, Economics and Statistics, Industrial Security, Legal, Secretary's, and the Financial Adviser's Branches.

The following Crown companies report to Parliament through the Minister of Defence Production: Canadian Arsenals Limited, Canadian Commercial Corporation, Crown Assets Disposal Corporation, Defence Construction (1951) Limited, and Polymer Corporation Limited.

Dominion Bureau of Statistics.—The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V, c. 43). In 1948, this statute, which had been consolidated as the Statistics Act (R.S.C. 1927, c. 190), was repealed and replaced by the Statistics Act (R.S.C. 1952, c. 257); it was amended by 1-2 Eliz. II, c. 18, assented to Mar. 31, 1953.

The function of the Dominion Bureau of Statistics is to compile, analyse and publish statistical information relative to the commercial, industrial, financial, social and general condition of the people and to conduct a census of population and agriculture of Canada at ten-year intervals.

The Bureau is the principal publication agency of the Federal Government; the subjects of the reports cover all aspects of the national economy. The Bureau reports to Parliament through the Minister of Trade and Commerce.

The Department of External Affairs.—The main function of this Department is the protection and advancement of Canadian interests abroad. The head of the Department of External Affairs is the Secretary of State for External Affairs. The senior permanent officer of the Department is the Under-Secretary (Deputy Minister), who is the chief adviser to the Secretary of State for External Affairs. He is assisted by an Associate Under-Secretary and by three Assistant Under-Secretaries and a Legal Adviser, and is advised by officers in charge of the various divisions, each responsible for a part of the work of the Department. The divisional heads are assisted by Foreign Service Officers, Administrative Officers and by the administrative staff of clerks, stenographers and typists. While serving abroad, Foreign Service Officers are formally designated as Ambassadors, Ministers, Counsellors, First, Second and Third Secretaries at diplomatic posts and as Consuls General, Consuls and Vice-Consuls at consular posts. Fifty-two diplomatic and consular posts are maintained abroad by Canada.

The work of the Department at Ottawa is performed by 17 divisions which can be grouped, according to their functions, into three categories—political, functional and administrative. There are five political divisions—American, Commonwealth, European, Far Eastern and United Nations; eight functional divisions—Consular, Defence Liaison (1) and (2), Economic, Information, Legal, Historical Research and Reports, and Protocol; and four administrative divisions—Establishments and Organization, Finance, Personnel, Supplies and Properties.

The Department of Finance.—The Department of Finance, created in June 1868, is under the authority of the Minister of Finance. The Department is responsible for the financial administration of Canada including raising the money required for the various governmental activities by way of taxation or borrowing. The Comptroller of the Treasury, an officer of the Department, is responsible for all Government disbursements.

The work of the Department is organized in seven principal Divisions: Administration, Financial Administration and Accounting Policy, Superannuation, Treasury Board, Taxation, Economic Policy, and International Economic Relations. The Royal Canadian Mint is a branch of the Department. The Inspector General of Banks and the Comptroller of the Treasury are officers of the Department.

The Tariff Board and the Canadian Farm Loan Board are responsible to Parliament through the Minister of Finance.

The Department of Fisheries.—The Department of Fisheries was first organized under a Minister of Fisheries in 1930. Prior to that date the federal fisheries services were maintained by the former Department of Marine and Fisheries, established in 1868. The provinces, under various arrangements, have certain administrative responsibilities in the fisheries but the legislative authority for the regulations of coastal and fresh-water fisheries is with the Federal Department of Fisheries.

The work of the Department includes: conservation and development of the fisheries through the enforcement of fishing regulations, the operation of fish-culture establishments, management and improvement of spawning streams and control of predators; inspection of fish products for quality control and the encouragement of industrial development; promotion of the greatest utilization of fishery products and a proper public understanding of the resource and the industry.

Agencies connected with the Department are the Fisheries Prices Support Board and the Fisheries Research Board of Canada. The Department is represented on these International Commissions: Pacific Salmon Fisheries, Pacific Halibut, that for the Northwest Atlantic Fisheries, North Pacific Fisheries and Whaling.

The Department of Insurance.—The Minister of Finance is responsible for the Department of Insurance which originated in 1875. Under the Superintendent of Insurance, the Department administers the statutes of Canada applicable to: insurance, trust and loan companies incorporated by the Parliament of Canada; provincially incorporated insurance companies registered with the Department; British and foreign insurance companies operating in Canada; small loans companies and money-lenders; and Civil Service insurance. *See also* Chap. XXVI (Part II) and Chap. XXVII.

Under the relevant provincial statutes, the Department examines provincial trust companies in the Provinces of Manitoba and New Brunswick and loan and trust companies in the Province of Nova Scotia.

A Fire Prevention Branch was organized in 1919 with responsibility for the administration of Sect. 515 of the Criminal Code. It maintains fire-loss records, makes inspections, reports on fire-prevention legislation and protection methods and endeavours to extend and co-ordinate fire-prevention work in Canada.

The Department of Justice.—This Department provides legal services to the Government and the various government departments, including preparing and settling government legislation, settling instruments issued under the Great Seal, regulating and conducting litigation for or against the Crown, superintending the acquisition of property and prosecutions under federal legislation other than the Criminal Code, administers federal statutes dealing with legal matters and provides administrative services for the Supreme Court of Canada and the Exchequer Court.

The Department also superintends the penitentiaries and administers the prison system of Canada.

The Department of Labour.—The Department of Labour was established in 1900 by Act of Parliament (63-64 Vict., c. 24). The Department administers, under the Minister of Labour, legislation dealing with: industrial relations, investigation of disputes, etc.; fair employment practices; the regulation of fair wages and hours of labour; government annuities; government employee compensation; merchant seamen compensation; vocational training; publication of the *Labour Gazette*, as well as bulletins giving information on industrial and related subjects.

The Unemployment Insurance Commission and National Employment Service are also under the direction of the Minister of Labour. The Canada Labour Relations Board and the National Advisory Council on Manpower also act on behalf of the Minister of Labour. The Department is the official liaison agency between the Canadian Government and the International Labour Organization.

The Department of Mines and Technical Surveys.—This Department was created by an Act of Parliament (13 Geo. VI, c. 17) which received Royal Assent on Dec. 10, 1949. Its establishment resulted from the reorganization of certain former departments into an integrated organization whose primary function is to provide technological assistance in the development of Canada's mineral resources through investigations, studies and research in the fields of geology, mineral dressing and metallurgy, and geodetic, topographic and other surveys. The Department is under the Minister of Mines and Technical Surveys and is divided into five branches: the Surveys and Mapping Branch, the Geological Survey of Canada, the Mines Branch, the Dominion Observatories and the Geographical Branch.

The Department also administers the Explosives Act which regulates the manufacture, testing, sale, storage and importation of explosives, and the Emergency Gold Mining Assistance Act which provides cost-aid to the gold industry.

Boards and Commissions are: Canadian Board on Geographical Names; Board of Examiners for Dominion Land Surveyors; International Boundary Commission and Interprovincial Boundary Commissions.

The Department of National Defence.—Created on Jan. 1, 1923, by the National Defence Act, 1922, the Department of National Defence was originally an amalgamation of the Department of Militia and Defence, the Naval Service and the Air Board.

In 1940, the Department of National Defence was separated into three departments, one for each of the Armed Services, and continued under this organization until the cessation of hostilities. In order to afford the maximum possible degree of co-ordination, the three Services were again brought into one departmental organization in 1946.

In 1947, the Defence Research Board was formed to carry out research projects for defence. It is responsible to the Minister of National Defence for this function and for advising him on the effect of scientific, technical and other research on national defence.

Department of National Health and Welfare.—The Department of National Health and Welfare was established in October 1944. Under the Minister of National Health and Welfare, the Department, which is composed of three branches (Health, Welfare and Administration), is administered through two Deputy Ministers.

The Health Branch is divided into three directorates—Health Insurance Studies, Food and Drugs, and Indian Health Services. It has 14 Divisions active in certain public health fields divided into three main groups—Medical Advisory, Research Development, and Environmental Health, each of which is headed by a Principal Medical Officer.

The Welfare Branch is made up of the Divisions of Family Allowances, Old Age Security, Old Age Assistance and Physical Fitness. The Department is also responsible for federal civil-defence planning, with the Civil Defence Co-ordinator reporting to both Deputy Ministers. The Administration Branch includes divisions where activities cover both health and welfare fields, such as research, information, legal and library services, as well as administrative, personnel and purchasing and supply services.

National Library.—The National Library Act, proclaimed Jan. 1, 1953, brought the National Library into being. Though at an early stage of organization, the Library publishes *Canadiana*—a monthly catalogue of new publications relating to Canada—and is well advanced on a national union catalogue to serve as a key to the contents of all important libraries in Canada. The National Librarian reports to the Minister of Citizenship and Immigration.

National Museum of Canada.—The National Museum illustrates the natural history of Canada — its geology, biology and anthropology. It was formerly part of the Geological Survey, founded in 1842, but was separated from it in 1920, and is now part of the Department of Northern Affairs and National Resources. The Museum carries out field investigations in botany, zoology, vertebrate palæontology, archæology and ethnology including studies of folk-lore and folk-songs, publishes the results of its research and carries out an extensive educational program.

The Department of National Revenue.—From Confederation until May 1918, customs and inland revenue Acts were administered by separate departments; after that date they were amalgamated under one Minister as the Department of Customs and Inland Revenue. In 1921, the name was changed to the Department of Customs and Excise. In April 1924, collection of income taxes was placed under the Minister of National Revenue and under the Department of National Revenue Act, 1927, the Department became known as the Department of National Revenue.

The Department is responsible for the assessment and collection of customs and excise duty, taxes and revenues and other services by ports and outports, as well as for the assessment and collection of income taxes and succession duties.

The Minister of National Revenue is responsible to Parliament for the Income Tax Appeal Board and the Canadian Broadcasting Corporation.

Department of Northern Affairs and National Resources.—The Department of Northern Affairs and National Resources was established in December 1953, superseding the Department of Resources and Development. In addition to Administration Services, which unit performs auxiliary functions, the Department is divided into five branches: the National Parks Branch administers the National Parks and National Historic Parks of Canada, National Historic Sites, and wildlife matters coming within the jurisdiction of the Federal Government, and has charge of the National Museum of Canada; the Engineering and Water Resources Branch is responsible for the investigation of water-power resources, for the administration of federal assistance to the provinces under the Canada Water Conservation Assistance Act and for federal interests in certain joint federal-provincial construction projects; the Northern Administration and Lands Branch is responsible for the administration of various Federal Acts, Territorial ordinances and regulations pertaining to the government of the Northwest Territories, for the conduct of certain business arising from the general administration of the Yukon Territory, for the administration of natural resources in these Territories, and for Eskimo affairs, as well as for certain lands and mineral rights in the provinces vested in the Crown in the right of Canada; the Forestry Branch conducts investigations in the protection and utilization of the forest resources of Canada, maintains forest experiment stations and forest products laboratories and administers federal assistance to the provinces under the Canada Forestry Act; and the Canadian Government Travel Bureau promotes the tourist industry by encouraging tourist travel from abroad and interprovincial travel in Canada.

The Minister of Northern Affairs and National Resources is also responsible to Parliament for the Eastern Rockies Forest Conservation Board, the Northwest Territories Power Commission, the National Battlefields Commission, the Historic Sites and Monuments Board, and the Advisory Board on Wildlife Protection. The Deputy Minister is Commissioner of the Northwest Territories.

Post Office Department.—Administration and operation of the Postal Service under the Postmaster General include: supervision of all phases of postal activity including personnel, mail handling, postal accommodation, transportation of mails by land, water, rail and air and the direction and control of financial services including the operation of money order and savings bank business.

Public Archives.—The Public Archives was founded in 1872 and is administered by the Dominion Archivist who has the rank of a Deputy Minister and reports to Parliament through the Minister of Citizenship and Immigration. Its purpose is to assemble and make available to the public a comprehensive collection of historical source material relating to the history of Canada. Major emphasis is placed upon official records of the Government, and the personal papers of political leaders and other prominent figures. These are supplemented by copies of many records in the British and French archives that relate to Canada, a fine map collection, a historical library, and many prints, paintings and photographs.

Department of Public Printing and Stationery.—This Department was established in 1886 and is in the charge of the Queen's Printer and Controller of Stationery.

The Department is responsible for supplying all requirements of printing and stationery to Parliament and Departments of the Canadian Government; the free distribution and sale of all public documents or papers to the public; the publication of the *Statutes of Canada*, the *Canada Gazette*, and all departmental reports, papers, etc., required to be published by authority of the Governor General in Council.

The Department of Public Printing and Stationery is under the jurisdiction of the Secretary of State.

Department of Public Works.—This Department was constituted in 1867 and is responsible for the management, charge and direction of the public works of Canada and, except as specifically provided in other Acts, attends to the construction and maintenance of public buildings, wharves, piers, roads and bridges and the undertaking of dredging and navigable waters protection work. The Department maintains architectural and engineering staffs in each province in addition to the Administrative, Architectural, Engineering and Purchasing and Stores Branches at Ottawa.

The Minister of Public Works is responsible to Parliament for the Central Mortgage and Housing Corporation and for federal interests in the Trans-Canada Highway.

Department of the Secretary of State.—The Department of the Secretary of State was constituted in its present form in 1873. The Secretary of State is the official spokesman of the Federal Government as well as the medium of communication between the Federal and Provincial Governments, all correspondence between the Governments being conducted through his Department with the Lieutenant-Governors. He is the custodian of the Great Seal of Canada and the Privy Seal of the Governor General as well as being the channel through which the general public may approach the Crown.

The Secretary of State is the Registrar General of Canada, registering all proclamations, commissions, licences, warrants, writs and other instruments issued under the Great Seal and certain instruments issued under the Privy Seal. He is responsible for the collection and tabling of parliamentary returns.

The Secretary of State also deals with the organization and administration of the Office of the Custodian of Enemy Property. The Civil Service Commission, the Department of Public Printing and Stationery and the Chief Electoral Officer are under the jurisdiction of the Secretary of State, but each of the three Civil Service Commissioners, the Queen's Printer and the Chief Electoral Officer has the rank of Deputy Minister.

The Department of the Secretary of State deals with correspondence concerning the Copyright Appeal Board, the Awards Co-ordination Committee, the Public Records Committee and the Inter-departmental Committee on the use of Parliament Hill. The Special Division deals with domestic protocol, government hospitality and related matters.

Department of Trade and Commerce.—The Department of Trade and Commerce was established by Act of Parliament on June 23, 1887, but did not function until Dec. 5, 1892, when an Order in Council to this effect was passed. Prior to its creation, assistance in the development of Canada's foreign trade was provided by five Canadian Commercial Agents, who served on a part-time basis and were responsible to the Minister of Finance. On Jan. 1, 1895, a Canadian Commercial Agent was appointed at Sydney, Australia, on a full-time basis. He thus became the first Canadian Government Trade Commissioner, in the present meaning of the term.

The Canadian Commercial Agency Service was renamed the Canadian Trade Commissioner Service in 1907, as the term agent created the impression that an officer so designated had something to buy or sell. Officers devoting all their time to the promotion of Canadian trade, and on salary, were thus termed Canadian Trade Commissioners, while those receiving an honorarium were still known as Commercial Agents. The following year, the position of Superintendent of Commercial Agencies was abolished, and a Deputy Minister of Trade and Commerce was appointed on Aug. 1, 1908. Forty-nine offices in 41 countries were maintained in 1953. In addition to trade commissioners and assistant trade commissioners, the foreign service officers included nine agricultural specialists, three fisheries specialists and one timber specialist. Where trade commissioners are members of a mission maintained by the Department of External Affairs, they are given diplomatic status and are known as Commercial Counsellors or Commercial Secretaries.

The Department of Trade and Commerce was expanded in 1945 to provide a wide range of additional services to Canadian businessmen, and now comprises the following Branches and Divisions: Canadian Trade Commissioner Service, Commodities Branch, Agriculture and Fisheries Branch, International Trade Relations Branch, Canadian Government Exhibition Commission, International Economic and Technical Co-operation Division (responsible for administration of the Colombo Plan), Information Branch, Industrial Development Division, Standards Branch and Economics Branch.

The following boards, commissions, Crown companies and agencies report to Parliament through the Minister of Trade and Commerce: Atomic Energy Control Board, Atomic Energy of Canada Limited, Board of Grain Commissioners, Canadian Patents and Development Limited, Canadian Wheat Board, Export Credits Insurance Corporation, National Research Council and Trans-Canada Air Lines.

The Department of Transport.—The Department of Transport was created on Nov. 2, 1936, from the former Department of Marine, Railways and Canals and the Civil Aviation Branch of the Department of National Defence.

The work of the Department consists of four main Services: Marine, Air, Canals and Railways. The work of the Marine Service includes aids to navigation, nautical and pilotage services, marine agencies, steamship inspection and floating equipment and direct supervision over 300 public harbours; seven other harbours come under supervision of the Department but are administered by Commissions. Air Services cover the operation of civil aviation, meteorological and telecommunication divisions. The latter includes the administration and regulation of radar, radio marine and radio aeronautical aids to navigation and communication by wire and by government telegraph and telephone. The Canal Service has jurisdiction over the canals and canalized waterways of Canada. These include the main or primary canals on the St. Lawrence River and Great Lakes and a number of subsidiary or secondary canals.

Other services of the Department are in connection with the Government-owned companies: the Canadian National Railways, Hudson Bay Railway, Canadian Government Railway, Canadian National (West Indies) Steamship Service and the Prince Edward Island Ferry and Terminals.

The Minister of Transport is responsible to Parliament for the following boards and commissions: the Air Transport Board; Board of Transport Commissioners; Canadian Maritime Commission; Steamship Inspection Board; National Harbours Board; Park Steamship Company Limited; and Canadian National Railway Securities Trust. The Minister is responsible to Parliament for the Canadian Overseas Telecommunication Corporation. The St. Lawrence Seaway Authority reports to Parliament through the Minister of Transport. (*See* Appendix).

Department of Veterans Affairs.—This Department, established in 1944, is concerned exclusively with the welfare of veterans and includes medical, dental and welfare services, land settlement and prosthetic services and insurance. The Veterans' Bureau assists veterans in the preparation and presentation of pension claims.

The Minister of Veterans Affairs is also responsible for the Canadian Pension Commission and the War Veterans Allowance Board. The Department has administrative offices in all the larger cities across Canada and at London, England.

Section 2.—Crown Corporations

The Crown corporation form of public enterprise is not a new type of organization in Canada but, in recent years, as the work of government has become more complex, greater reliance has been placed on it as the appropriate instrument for administering and managing many public services in which business enterprise and public accountability must be combined.

The use of the corporate device to harmonize public responsibility in the development of economic resources and the provision of public services with the pursuit of commercial and industrial objectives has led to the adoption of many different forms and formulæ of management. The most usual practice has been to set up a corporation under the provisions of a special Act of Parliament which defines its purpose and sets forth its powers and responsibilities. However, during World War II, the Minister of Munitions and Supply was authorized to procure the incorporation of companies under the federal Companies Act, 1934, or under any provincial companies Act, to which he might delegate any of the powers conferred on him under the Department of Munitions and Supply Act or any Order in Council. Under this legislation, some 28 companies were created to serve a wide variety of purposes; most of these companies have since been wound up.

Following the successful experience during the war years in relying on the Companies Act for the establishment of Crown companies, similar incorporating powers were granted by an amendment to the Research Council Act and have been incorporated in the Atomic Energy Control and the Defence Production Acts.

In 1946, the Government Companies Operation Act was passed to regulate the operation of companies formed under the Companies Act. However, it was applicable only to a relatively small number of companies and, in order to establish a more uniform system of financial and budgetary control and of accounting, auditing and reporting for Crown corporations generally, Part VIII of the Financial Administration Act was enacted in 1951 and brought into operation by proclamation on Oct. 1, 1952. Upon its enactment, the financial provisions of the Government Companies Operation Act, which were covered by similar provisions in the new Act, were repealed.

One of the more interesting features of the new legislation is the attempt that has been made to define and classify Crown corporations.* The Act defines a Crown corporation as a corporation that is ultimately accountable through a Minister to Parliament for the conduct of its affairs and establishes three classes of corporation: departmental, agency, and proprietary.

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* Not all Crown corporations are subject to the provisions of the Financial Administration Act. For example, the Canadian Wheat Board, the Bank of Canada and its subsidiary, the Industrial Development Bank, because of the special nature of their functions, are excluded from the operations of the Crown Corporations Part of the Act and are governed by their own Acts of incorporation, as are such joint enterprises of the Federal and Provincial Governments as the Eastern Rockies Forest Conservation Board and the Halifax Relief Commission.

Departmental Corporations.—A departmental corporation is defined as a Crown corporation that is a servant or agent of Her Majesty in right of Canada and is responsible for administrative, supervisory or regulatory services of a governmental nature. Ten departmental corporations are listed in Schedule B to the Act:—

Agricultural Prices Support Board
Atomic Energy Control Board
Canadian Maritime Commission
Director of Soldier Settlement
The Director, The Veterans' Land Act
Dominion Coal Board
Fisheries Prices Support Board
National Gallery of Canada
National Research Council
Unemployment Insurance Commission.

Agency Corporations.—An agency corporation is defined as a Crown corporation that is an agent of Her Majesty in right of Canada and is responsible for the management of trading or service operations on a quasi-commercial basis, or for the management of procurement, construction or disposal activities on behalf of Her Majesty in right of Canada. Schedule C to the Financial Administration Act lists the following as agency corporations:—

Canadian Arsenals Limited
Canadian Commercial Corporation
Canadian Patents and Development Limited
Canadian Sugar Stabilization Corporation Limited
Commodity Prices Stabilization Corporation Limited
Crown Assets Disposal Corporation
Defence Construction (1951) Limited
Federal District Commission
National Battlefields Commission
National Harbours Board
Park Steamship Company Limited.

Since the proclamation of the Financial Administration Act, Atomic Energy of Canada Limited has been added to the agency grouping, and two corporations, Canadian Sugar Stabilization Corporation Limited and Commodity Prices Stabilization Corporation Limited, have discontinued operations and have surrendered their charters.

Proprietary Corporations.—A proprietary corporation is defined as a Crown corporation that (1) is responsible for the management of lending or financial operations, or for the management of commercial or industrial operations involving the production of or dealing in goods and the supplying of services to the public, and (2) is ordinarily required to conduct its operations without Parliamentary appropriations. Twelve such corporations are listed in Schedule D to the Act:—

Canadian Broadcasting Corporation
Canadian Farm Loan Board
Canadian National (West Indies) Steamships Limited
Canadian Overseas Telecommunication Corporation
Central Mortgage and Housing Corporation
Eldorado Mining and Refining Limited
Export Credits Insurance Corporation
National Railways, as defined in the Canadian National-Canadian Pacific Act, 1933
Northern Transportation Company Limited
Northwest Territories Power Commission
Polymer Corporation Limited
Trans-Canada Air Lines.

Eldorado Aviation Limited, a subsidiary of the Eldorado Mining and Refining Limited, was incorporated as a private company pursuant to the provisions of Part I of the Companies Act on Apr. 23, 1953, and was subsequently added to Schedule D as a proprietary corporation by the Governor in Council pursuant to Sect. 76 of the Financial Administration Act. The St. Lawrence Seaway Authority (*see* Appendix) is also a proprietary corporation.

Departmental corporations are governed by the provisions of the Financial Administration Act that are applicable to departments generally. Agency and proprietary corporations, however, are subject to the provisions of the Crown corporations Part of the Act, although, if there is any inconsistency between the provisions of that Part and those of any other Act applicable to a corporation, the Act provides that the latter prevail. There is provision in the Part for the control and regulation of such matters as corporation budgets and bank accounts, the turning over to the Receiver General of surplus money, limited loans for working-capital purposes, the awarding of contracts and the establishment of reserves, the keeping and auditing of accounts, and the preparation of financial statements and reports and their submission to Parliament through the appropriate Minister.

A further form of control is exercised by Parliament through the power to vote financial assistance. This may take different forms. For some corporations, capital may be provided by parliamentary grants, loans or advances that may subsequently be converted into capital stock or bonds; for others it may be by the issue of capital stock to be subscribed and paid for by the Government; or by the sale of bonds either to the Government or the public. In a few instances, corporations have financed all or a portion of their requirements from their own resources or earnings. A special financing arrangement recently adopted has been the allocation of the 15-p.c. excise tax charged on radio and television sets and their parts and accessories to the revenue of the Canadian Broadcasting Corporation.

Prior to 1952, Crown corporations did not pay corporate income taxes. However, the Income Tax Act was later amended so that, in respect of financial years commencing after Jan. 1, 1952, proprietary Crown corporations pay such taxes on income earned in the same manner as any privately owned corporation. One desirable result of this amendment is that the financial statements of these Crown companies are now more comparable with those of private industry, with which in some instances they are in competition, and thus it is easier to assess the relative efficiency of their operations.

The functions of the various Crown corporations are given briefly in the following paragraphs. In a number of cases, further details are included in the Chapters dealing with the subjects concerned (*see* Index).

Agricultural Prices Support Board.—The Board was established in 1944 to assist in stabilizing the prices of agricultural products. The Board reports to Parliament through the Minister of Agriculture.

Atomic Energy Control Board.—In December 1946, by Act of Parliament, all matters concerning atomic energy in Canada were placed under the Atomic Energy Control Board. From Feb. 1, 1947, to Apr. 1, 1952, the National Research Council operated the Chalk River project as an agent of the Board. The Board reports to Parliament through the Minister of Trade and Commerce.

Atomic Energy of Canada Limited.—This Crown Company was incorporated in February 1952 under the Atomic Energy Control Act, 1946, to take over from the National Research Council on Apr. 1, 1952, the operation of the Chalk River project on behalf of the Atomic Energy Control Board. The main functions of the Company are the operation of atomic reactors, research into many aspects of atomic energy and the extraction, processing and marketing of the by-products of the reactors. The Board reports to Parliament through the Minister of Trade and Commerce.

Bank of Canada.—Legislation of 1934 (R.S.C. 1952, c. 13), provided for the establishment of a central bank in Canada, the function of which is to regulate credit and currency, to control and protect the external value of the Canadian dollar and to stabilize the level of production, trade, prices and employment so far as may be possible within the scope of monetary action. The Bank acts as the fiscal agent of the Government of Canada, manages the public debt and has the sole right to issue notes for circulation in Canada. The Bank is managed by a Board of Directors appointed by the Government and composed of a Governor, a Deputy Governor and 12 Directors; the Deputy Minister of Finance is also a member of the Board. The Bank is governed by its own Act of incorporation. (*See* footnote, p. 98.)

Board of Grain Commissioners.—Under the Canada Grain Act 1930 (R.S.C. 1952, c. 25), the Board of Grain Commissioners for Canada, comprising a Chief Commissioner, two Commissioners and three Assistant Grain Commissioners, has authority to inquire into any matter relating to the grading and weighing of grain, deductions for dockage or shrinkage, deterioration of any grain during storage or treatment, unfair or discriminatory operation of a grain elevator, etc. The Board publishes its regulations in the *Canada Gazette* and reports to Parliament through the Minister of Trade and Commerce.

Canadian Arsenals Limited.—This Company was set up in September 1945 to take over Crown-owned plant and equipment. Among the items it now manufactures are propellants and explosives, small arms, radars and a wide range of ammunition and components. Its Divisions, together with the location of their plants, are as follows: Dominion Arsenal Division (Quebec, Valcartier and Rivière-du-Loup, Que.); Explosives Division (Valleyfield and Shawinigan Falls, Que., and storage depot at St. Dominique, Que.); Filling Division (St. Paul l'Ermite, Que.); Gun Ammunition Division (Lindsay, Ont.); Small Arms Division (Long Branch, Ont.); Instrument and Radar Division (Scarborough, Ont.). The Company is responsible to Parliament through the Minister of Defence Production.

Canadian Broadcasting Corporation.—Legislation passed in 1936 (R.S.C. 1952, c. 32), provides that there shall be a corporation, to be known as the Canadian Broadcasting Corporation, which shall consist of a Board of 11 Governors appointed by the Governor in Council and chosen to give representation to the principal geographic divisions of Canada. The Board of Governors determines CBC policy, and the Chairman of the Board is required to devote the whole of his time to the performance of his duties under the Act.

The General Manager is the Chief Executive of the Corporation and directs the operations and activities of the Corporation as well as the application of CBC policy as determined by the Board of Governors. The organization of the CBC consists of the following principal Divisions: Program, International Service, Engineering, Commercial, Press and Information, Broadcast Regulations, Station Relations, Personnel and Administration, and Treasury. Regional Representatives are appointed for Newfoundland, the Maritimes, Quebec, Ontario, the Prairies, and British Columbia.

The Corporation reports to a Minister of the Crown (at present the Minister of National Revenue) who is responsible for dealing with CBC operations when these are under consideration in Parliament.

Canadian Commercial Corporation.—The Canadian Commercial Corporation, established on May 1, 1946, acts as purchasing agent for foreign governments seeking defence supplies in Canada. It also acts as purchasing agent for international agencies such as the United Nations International Children's Emergency Fund and the United Nations Korean Reconstruction Agency. Other functions include arranging production and shipment of Canadian contributions of military stores to NATO countries. The Corporation also serves other departments of the Government of Canada. For instance, it arranges for the purchase and production of supplies and services which the Department of Trade and Commerce is making available to other countries under the Colombo Plan. In carrying out its functions, the Corporation works closely with the Departments of Trade and Commerce and Defence Production. It is responsible to Parliament through the Minister of Defence Production.

Canadian Farm Loan Board.—The Board was organized in 1929 to make loans to farmers secured by mortgage. Later operations extended loans to fishermen secured by mortgage on real estate. The Board is responsible to Parliament through the Minister of Finance.

Canadian Maritime Commission.—The Commission was created in 1947 (R.S.C. 1952, c. 38) to consider and recommend policies and measures necessary for the operation, maintenance, manning and development of a merchant marine and a ship-building and ship-repairing industry. The Commission is responsible to Parliament through the Minister of Transport.

Canadian National Railways.—Operating under an Act to incorporate the Canadian National Railway Company (1919), brought into effect by Order in Council of Jan. 30, 1923, the Canadian National Railways comprised at that time the old Intercolonial Railway and various eastern branch lines (all embraced in the Canadian Government Railways which were turned over to the Canadian National board for management and operation), the Canadian Northern Railway (1918) and the Grand Trunk Pacific (1923). The Hudson Bay Railway has been operated by the Canadian National Railways for the Canadian Government since 1935 and a separate accounting is made. Additional lines have been built or acquired and are operated by the Canadian National Railways. The Newfoundland Railway was entrusted to the Canadian National Railway Company in 1949 for operation and management. The CNR is controlled by a Chairman and Board of Directors and is responsible to Parliament through the Minister of Transport.

Canadian National (West Indies) Steamships Limited.—Through the medium of this Crown Company, the Federal Government provides direct steamship services to the West Indies in conformity with the Canada-West Indies Trade Agreement of 1926. The Company is responsible to Parliament through the Minister of Transport.

Canadian Overseas Telecommunication Corporation.—This Crown Company was created on Dec. 10, 1949, by Act of Parliament (R.S.C. 1952, c. 42) to acquire for public operation all external telecommunication assets in Canada, in keeping with the Commonwealth Telegraph Agreement, signed May 11, 1948. This Agreement was designed to bring about the consolidation and strengthening of the radio and cable communication systems of the Commonwealth. The Corporation is responsible to Parliament through the Minister of Transport.

Canadian Patents and Development Limited.—Incorporated under an amendment to the Research Council Act, passed in 1946, the primary purpose of Canadian Patents and Development Limited is to make available to industry, through licensing arrangements, the inventions and new processes developed by the scientific workers of the National Research Council. Their services are also available to other Government Departments, publicly supported institutions and universities. The Board of Directors is composed of representatives from industry, from the universities, and from the National Research Council.

The Canadian Wheat Board.—The Board was incorporated under the Canadian Wheat Board Act to market, in an orderly manner, in the interprovincial and export trade, grain grown in Canada. Its powers include authority to buy, take delivery of, store, transfer, sell, ship or otherwise dispose of grain. Except as directed by the Governor in Council, the Board cannot buy grain other than wheat, but since Aug. 1, 1949, the Board has been directed to buy oats and barley also. Only grain produced in the designated area, which includes Manitoba, Saskatchewan, Alberta and parts of British Columbia and Ontario, is purchased by the Board, which controls the delivery of grain into elevators and railway cars in that area as well as the interprovincial movement and export of wheat, oats and barley generally. (*See* footnote, p. 98.)

Central Mortgage and Housing Corporation.—This Corporation was incorporated by Act of Parliament in 1945 to administer the National Housing Act, 1944, and earlier housing Acts, to provide facilities for the rediscounting of mortgages for lending institutions and to co-ordinate activities of the Federal Government in the housing field. Since 1950, the Corporation has provided management and supervisory services to Defence Construction Limited which is entrusted with carrying out the construction of defence projects required by the Department of National Defence. The Corporation is responsible to Parliament through the Minister of Public Works.

Crown Assets Disposal Corporation.—By statute, War Assets Corporation was established in June 1944, replacing War Assets Corporation Limited which had been incorporated in 1943. In 1949 the name of War Assets Corporation was changed to Crown Assets Disposal Corporation. The Corporation's function is to dispose of surplus Crown assets. It is responsible to Parliament through the Minister of Defence Production.

Defence Construction (1951) Limited.—This Company was set up in 1951 to carry out all defence construction, with the exception of housing and aeroplane runways. It replaced the former Crown Company, Defence Construction Limited, which was set up in November 1950. The Company reports to Parliament through the Minister of Defence Production.

Director of Soldier Settlement and Director of the Veterans' Land Act.—The Director of Soldier Settlement (under the Act of 1919) is also the Director of the Veterans' Land Act, and in either capacity is legally a corporation sole. For administrative purposes, however, the programs carried on under both Acts constitute integral parts of the services provided by the Department of Veterans Affairs.

Dominion Coal Board.—The Board, created in 1947 under the Dominion Coal Board Act (R.S.C. 1952, c. 86), is charged with the duty of studying and recommending to the Government policies respecting the production, importation, distribution and use of coal in Canada. It also administers transportation subventions, other subsidies relating to coal and loans authorized under the Maritime Coal Production Assistance Act (R.S.C. 1952, c. 170).

Eastern Rockies Forest Conservation Board.—The Board was appointed in 1947 under the Eastern Rocky Mountain Forest Conservation Act, which authorized an agreement between the Government of Canada and the Province of Alberta relating to the protection and conservation of the forests of that area of the eastern slope of the Rocky Mountains which forms part of the watershed of the Saskatchewan River. The function of the Board is to plan, supervise and undertake construction, operation and maintenance of projects and facilities necessary for the proper protection of the forests of the area to obtain the greatest possible flow of water in the Saskatchewan River and its tributaries.

During the first seven years of the agreement the Federal Government has undertaken to provide $6,300,000 for capital expenditure and Alberta to provide funds for maintenance expenditures. During the period of capital expenditure the Federal Government appoints the Chairman and one member and the Province one member. After the capital period the Federal Government appoints one member, the Government of Alberta appoints two and names one of the three as Chairman. (*See* footnote, p. 98.)

Eldorado Aviation Limited.—Incorporated Apr. 23, 1953, to carry air traffic, both passenger and freight, for Eldorado Mining and Refining Limited and its wholly owned subsidiary, Northern Transportation Company Limited, the Company reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Eldorado Mining and Refining Limited.—Set up in 1944 under the name of Eldorado Mining and Refining (1944) Limited (the name was changed in June 1952) the Company's business is that of prospecting for, mining and refining uranium ores in Canada. It reports to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Export Credits Insurance Corporation.—This Company commenced operations in 1945, under the Export Credits Insurance Act, 1944, and comprises a Board of Directors (including the Deputy Minister of Trade and Commerce, the Deputy Minister of Finance and the Governor of the Bank of Canada) and an Advisory Council. Its function is to insure Canadian exporters against non-payment by foreign buyers arising out of credit and political risks involved in foreign trade. The Corporation reports to Parliament through the Minister of Trade and Commerce.

Federal District Commission.—This Commission had its genesis in the Ottawa Improvement Commission, established by Parliament in 1899 to improve and beautify the National Capital by the development and construction of parks and driveways and to co-operate with the City of Ottawa in local improvement and conservation. Its membership is honorary in character and is appointed by the Governor in Council, and it reports to the Prime Minister. In 1927, the organization's name was changed to the Federal District Commission, its scope of operations widened to include adjacent areas, and its membership increased to ten. Under the FDC Act, the mayors of Ottawa and Hull are included in its membership.

The Commission maintains the grounds of all federal buildings in the National Capital areas and landscapes the grounds of new government buildings. In the Ottawa-Hull area (exclusive of Gatineau Park), where it administers 1,878 acres, it has developed 18 parks and 22 miles of scenic driveways.

In 1946 the Commission became the federal agency responsible for carrying out the National Capital Plan. The membership was further increased to permit the appointment of a commissioner resident in each of the provinces and a separate honorary committee was established by the Commission to advise on the development of Gatineau Park. The National Capital Fund, to which Parliament has made annual grants of $2,500,000 since its inception in 1948, was made available to the Commission to execute the work of the National Capital Plan, and a National Capital Planning Committee was appointed to act as a permanent honorary advisory body to the Commission on the implementation of the Plan.

Fisheries Prices Support Board.—The Board was set up in July 1947 to recommend to the Government price support measures when severe price declines occur. The Board functions under the direction of the Minister of Fisheries and consists of an Acting Chairman, who is a senior officer of the Department of Fisheries, and five members chosen from private and co-operative firms in the industry. The Board has authority to buy fishery products and to sell or otherwise dispose of them, or to pay producers the difference between a price prescribed by the Board and the average price the product actually commands.

Halifax Relief Commission.—The Commission, a joint enterprise of the Legislature of Nova Scotia (Statutes of N.S., 1918, c. 61) and the Parliament of Canada (Statutes of Canada, 1918, c. 24), was incorporated to administer relief funds contributed for the assistance of sufferers in consequence of the disastrous explosion at Halifax, Dec. 17, 1917. (*See* footnote, p. 98.)

Industrial Development Bank.—The Bank, a subsidiary of the Bank of Canada, was incorporated in 1944 to provide loans to industrial enterprises where financing is not available through recognized lending organizations. (*See* footnote, p. 98.)

National Battlefields Commission.—This Commission was established by Act of Parliament in 1908 to preserve the historic battlefields at Quebec City. The Commission is composed of nine members, seven being appointed by the Federal Government and one each by the Provinces of Ontario and Quebec. The Commission is supported by an annual statutory grant from the Federal Government and is responsible to Parliament through the Minister of Northern Affairs and National Resources.

National Film Board.—The National Film Board was established in 1939 and the National Film Act (R.S.C. 1952, c. 185), provides for a Board of Governors of nine members —a Government Film Commissioner, appointed by the Governor in Council, who is Chairman of the Board, three members from the public service of Canada and five members from outside the public service. The Board reports to Parliament through a designated Minister of the Crown (at present the Minister of Citizenship and Immigration). The Board is responsible for advising the Governor in Council on film activities and is authorized to produce and distribute films in the national interest and, in particular, films "designed to interpret Canada to Canadians and to other nations".

National Gallery.—The National Gallery was founded in 1880. By Act of Parliament in 1913 and re-enacted in 1951, it was placed under the management of a Board of Trustees appointed by the Governor General in Council, and is responsible to Parliament through a Minister of the Crown (at present the Minister of Citizenship and Immigration).

The first charge of the National Gallery is the development and care of the national art collections. Other important services are the arrangement of loans and exhibitions from abroad and from its own holdings for showing in Canada and abroad, the promotion of good industrial design, and general extension work consisting of the distribution of reproductions for educational purposes, lectures, educational tours, publications, school broadcasts and art films.

National Harbours Board.—The Board was established by Act of Parliament in 1936. It is responsible for the administration of port facilities at the harbours of Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver and Churchill. The Board is responsible to Parliament through the Minister of Transport.

National Research Council.—In 1917, the Research Council Act was passed and in 1928, laboratories for scientific research were established at Ottawa. The National Research Council now has divisions of pure and applied chemistry, building research, mechanical engineering, radio and electrical engineering, physics, applied biology and medical research. Regional laboratories have been established at Saskatoon, Sask., and Halifax, N.S.

Patentable processes and improvements developed by the Council are made available under licence to industry through a Crown company, Canadian Patents and Development Limited (*see* p. 102), and any profits from the licensing arrangements are used for further research and development.

The Minister of Trade and Commerce, as Chairman of the Privy Council Committee on Scientific and Industrial Research, is responsible to Parliament for the National Research Council.

Northern Transportation Company Limited.—This Company was incorporated in 1947 under the title of Northern Transportation Company (1947) Limited, the name being changed in 1952. Previously a company chartered under an Alberta Statute, it has been a wholly owned subsidiary of Eldorado Mining and Refining Limited since that Crown company was established, and carries out the business of a common carrier in the Mackenzie River watershed. The Company is responsible to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

Northwest Territories Power Commission.—The Commission was established by Act of Parliament in 1948 to bring electric power to points in the Northwest Territories where a need developed and where power could be provided on a self-sustaining basis. The Act was amended in 1950 to give authority to the Commission to provide similar services in the Yukon Territory. The Commission is composed of a Chairman and two members appointed by the Governor in Council; it operates hydro-electric plants on the Snare River in the Northwest Territories and on the Mayo River in Yukon Territory and a diesel electric plant at Fort Smith, N.W.T. The Minister of Northern Affairs and National Resources reports to Parliament for the Commission.

Park Steamship Company Limited.—After World War II, this Company acted as an agent for Crown Assets Disposal Corporation in the sale and delivery to purchasers of Government war-built ships. This work is completed but the Company remains available to carry out any appropriate duties. It has no staff of its own, any necessary work being done by the staff of the Canadian Maritime Commission (*see* p. 101). The Company reports to Parliament through the Minister of Transport.

Polymer Corporation Limited.—The Corporation was established in 1942 for the purpose of constructing and operating a synthetic rubber plant, which now produces a variety of synthetic rubber products. The plant is located at Sarnia, Ont. The Corporation reports to Parliament through the Minister of Defence Production.

St. Lawrence Seaway Authority (*See* Appendix).

Trans-Canada Air Lines.—TCA came into being by Act of Parliament in 1937 to provide for the development of a government-controlled scheduled transcontinental air service. Transatlantic air services, which were inaugurated by the Department of Transport during World War II, were later turned over to TCA. TCA now maintains passenger, mail and commodity traffic services over nation-wide routes and also services to the United States, Mexico, England, Scotland, Ireland, France, West Germany, Bermuda, the Bahamas, Jamaica, Barbados and Trinidad. TCA is responsible to Parliament through the Minister of Trade and Commerce.

Unemployment Insurance Commission.—The Commission was appointed on Sept. 24, 1940, under the provisions of the Unemployment Insurance Act, 1940, for the purpose of administering the Act. It is composed of three Commissioners: a Chief Commissioner, a Commissioner appointed after consultation with organizations representative of workers, and another after consultation with organizations representative of employers. The Chief Commissioner holds office for ten years and each of the other Commissioners for five years. The Board is responsible to Parliament through the Minister of Labour.

Section 3.—Acts Administered by Federal Departments*

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada

NOTE.—*Copies of individual Acts of Parliament and amendments may be obtained from the Queen's Printer, Ottawa, at prices of from 10 cents to $1·50 per copy according to number of pages. Where duplications of certain Acts appear in the list, parts of these Acts are administered under the Departments given.*

Department, Year and Chapter	Name of Act	Department, Year and Chapter	Name of Act
Agriculture—		**Auditor General—**	
R.S.C. 1927 36	Criminal Code, Sect. 235, Race-Track Betting.	R.S.C. 1952 116	Financial Administration.
R.S.C. 1952 3	Agricultural Prices Support.		
5	Agricultural Products Co-operative Marketing.	**Citizenship and Immigration—**	
9	Animal Contagious Diseases.	1927 37	St. Regis Indian Reservation.
22, 305	Canada Dairy Products.	1934 29	Caughnawaga Indian Reserve.
47	Cheese and Cheese Factory Improvement.	1943 19	British Columbia Indian Reserves Mineral Resources.
52, 313	Cold Storage.	R.S.C. 1952 33	Canadian Citizenship.
66	Department of Agriculture.	67	Department of Citizenship and Immigration.
81	Destructive Insect and Pest.		
101	Experimental Farm Stations.	146	Immigration Aid Societies.
113	Feeding Stuffs.	149	Indian.
115	Fertilizers.	185	National Film Act.
126	Fruit, Vegetables and Honey.	186	National Gallery.
141	Hay and Straw Inspection.	325	Immigration.
155	Inspection and Sale.		
167	Live Stock and Live Stock Products.		
168	Live Stock Pedigree.	**Civil Service Commission—**	
172	Maple Products Industry.		
175	Maritime Marshland Rehabilitation.	R.S.C. 1952 48	Civil Service.
177	Meat and Canned Foods.		
180	Milk Test.	**Defence Production—**	
209	Pest Control Products.		
213	Prairie Farm Assistance.	R.S.C. 1952 35	Canadian Commercial Corporation.
214	Prairie Farm Rehabilitation.		
248	Seeds.	62	Defence Production.
294	Wheat Co-operative Marketing.	260	Surplus Crown Assets.

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* Compiled from information supplied by the respective Departments.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter	Name of Act
External Affairs—	
R.S.C. 1952 68	Department of External Affairs.
Finance—	
	Appropriation (Annual).
	Canadian National Railways Financing and Guarantee (Annual).
1951 20	Prairie Grain Producers Interim Financing.
46	Canadian National Railways Refunding.
1952 49	Dominion — Provincial Tax Rental Agreements.
R.S.C. 1952 12	Bank.
13	Bank of Canada.
15	Bills of Exchange.
36, 309	Canadian Farm Loan.
37	Canadian Fisherman's Loan.
110	Farm Improvement Loans.
111	Farmers' Creditors Arrangement.
116	Financial Administration.
131	Gold Export.
151, 326	Industrial Development Bank.
156	Interest.
182	Municipal Grants.
183	Municipal Improvements Assistance.
204	Pawnbrokers.
221	Provincial Subsidies.
232	Quebec Savings Banks.
245	Satisfied Securities.
261, 336	Tariff Board.
296	Winding-up.
315	Currency, Mint and Exchange Fund.
1952-53 47	Public Service Superannuation.
Fisheries—	
R.S.C. 1952 61	Deep Sea Fisheries.
69	Department of Fisheries.
118	Fish Inspection.
119	Fisheries.
120	Fisheries Prices Support.
121	Fisheries Research Board.
177	Meat and Canned Foods.
194	Northern Pacific Halibut Fishery (Convention).
205	Pelagic Sealing (Provisional Agreement).
244	Salt Fish Board.
252	Sockeye Salmon Fisheries (Convention).
293	Whaling Convention.
1952-53 15	Coastal Fisheries Protection.
44	North Pacific Fisheries Convention.
1954 18	Northwest Atlantic Fisheries Convention.
Insurance—	
R.S.C. 1952 31	Canadian and British Insurance Companies.
49	Civil Service Insurance.
70	Department of Insurance.
100, 320	Excise Tax.
125	Foreign Insurance Companies.
Insurance—concl.	
R.S.C. 1952 170	Loan Companies.
181	Money Lenders.
251	Small Loans.
272	Trust Companies.
296	Winding-up.
1952-53 28	Co-operative Credit Associations Act.
Justice—	
1940 43	Treachery.
R.S.C. 1952 14	Bankruptcy.
71	Department of Justice.
98	Exchequer Court.
106	Expropriation.
116	Financial Administration.
127	Fugitive Offenders.
144	Identification of Criminals.
154	Inquiries.
158	Interpretation.
159	Judges.
160	Juvenile Delinquents.
198	Official Secrets.
206	Penitentiary.
210	Petition of Right.
217, 333	Prisons and Reformatories.
241	Royal Canadian Mounted Police.
253	Solicitor General.
259, 335	Supreme Court.
264	Ticket of Leave.
299	Yukon Administration of Justice.
307	Canada Evidence.
314	Combines Investigation.
322	Extradition.
1952-53 530	Crown Liability.
1953-54 1	Criminal Code.
Labour—	
R.S.C. 1952 72	Department of Labour.
108	Fair Wages and Hours of Labour.
132	Government Annuities.
134	Government Employees Compensation.
152	Industrial Relations and Disputes Investigation.
178	Merchant Seamen Compensation.
236	Reinstatement in Civil Employment.
273, 337	Unemployment Insurance.
286	Vocational Training Co-ordination.
295	White Phosphorous Matches.
1952-53 19	Canada Fair Employment Practices.
Mines and Technical Surveys—	
R.S.C. 1952 26	Canada Lands Surveys.
73	Department of Mines and Technical Surveys.
95, 318	Emergency Gold Mining Assistance.
102	Explosives.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter	Name of Act
National Defence—	
R.S.C. 1952 63	Defence Services Pension.
184	National Defence.
283	Visiting Forces (British Commonwealth).
284	Visiting Forces (North Atlantic Treaty).
285	Visiting Forces (United States of America).
National Health and Welfare—	
R.S.C. 1952 74	Department of National Health and Welfare.
National Health—	
R.S.C. 1952 29	Canada Shipping (Part V, Sick Mariners and Marine Hospitals).
123	Food and Drugs.
165	Leprosy.
201	Opium and Narcotic Drug.
220	Proprietary or Patent Medicine.
229	Public Works Health.
231	Quarantine.
Welfare—	
R.S.C. 1952 17	Blind Persons.
109	Family Allowances.
190	National Physical Fitness.
199	Old Age Assistance.
200	Old Age Security.
National Revenue—	
1940 2	War Exchange Conservation.
32	Excess Profits Tax.
1943 21	United States Tax Convention.
1946 38	Canada - United Kingdom Income Tax Agreement.
39	Succession Duty Agreement.
1948 34	Canada-New Zealand Income Tax Agreement.
1951 42	Canada-Sweden Income Tax Agreement.
R.S.C. 1952 58	Customs.
59	Customs and Fisheries Protection.
60, 316	Customs Tariff.
75	Department of National Revenue.
89	Dominion Succession Duty.
99, 319	Excise.
100, 320	Excise Tax.
102	Explosives.
103	Export.
104, 321	Export and Import Permits.
114	Ferries.
123	Food and Drugs.
131	Gold Export.
147	Importation of Intoxicating Liquors.
148	Income Tax.
215	Precious Metals Marking.

Department, Year and Chapter	Name of Act
Northern Affairs and National Resources—	
1908 57, 58	National Battlefields at Quebec.
R.S.C. 1927 87	Seed Grain.
88	Seed Grain Sureties.
116	Railway Belt.
124	Manitoba Supplementary Provisions.
180	Saskatchewan and Alberta Roads.
211	Railway Belt Water.
1927 51	Respecting certain debts due the Crown.
1928 32	Lac Seul Conservation.
1930 3	Alberta Natural Resources.
29	Manitoba Natural Resources.
37	Railway Belt and Peace River Block.
41	Saskatchewan Natural Resources.
1932 35	Refunds (Natural Resources).
55	Waterton Glacier International Peace Park.
1939 33	Rainy Lake Watershed Emergency Control.
1947 59	Eastern Rocky Mountain Forest Conservation.
R.S.C. 1952 24	Canada Forestry.
90	Dominion Water Power.
128	Game Export.
162	Land Titles.
179	Migratory Birds Convention.
189	National Parks.
192	National Wild Life Week.
196	Northwest Territories Power Commission.
224	Public Lands Grants.
263	Territorial Lands.
299	Yukon Administration of Justice.
300	Yukon Placer Mining.
301	Yukon Quartz Mining.
331	Northwest Territories.
1952-53 21	Canada Water Conservation Assistance.
39	Historic Sites and Monuments.
53	Yukon.
1953-54 4	Department of Northern Affairs and National Resources.
Post Office—	
R.S.C. 1952 212	Post Office.
Public Archives—	
R.S.C. 1952 222	Public Archives.
Public Printing and Stationery—	
R.S.C. 1952 226	Public Printing and Stationery.
230	Publication of Statutes.
Public Works—	
1934 59	Public Works Construction.
1935 34	Public Works Construction.
R.S.C. 1952 91	Dry Docks Subsidies.
106	Expropriation.
114	Ferries.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—continued

Department, Year and Chapter	Name of Act
Public Works— concl.	
R.S.C. 1952 135	Government Harbours and Piers.
138	Government Works Tolls.
193	Navigable Waters Protection, Part I.
216	Prime Minister's Residence.
228	Public Works.
234	Railway.
269	Trans-Canada Highway.
324	Government Property Traffic.
Secretary of State—	
R.S.C. 1929 55	Reparation Payment.
1947 24	Trading with the Enemy (Transitional Powers).
1948 71	Italy, Rumania, Hungary and Finland Treaties of Peace.
R.S.C. 1952 18	Boards of Trade.
23, 306	Canada Elections.
27	Canada Medical.
30	Canada Temperance.
53	Companies.
54	Companies Creditors Arrangement.
55	Copyright.
62	Defence Production.
77	Department of State.
83	Disfranchising.
87	Dominion Controverted Elections.
149	Indian.
195	Northwest Territories.
203	Patent.
208	Pension Fund Societies.
223	Public Documents.
225	Public Officers.
234	Railway.
235	Regulations.
247	Seals.
250	Shop Cards Registration.
263	Territorial Lands.
265	Timber Marking.
267	Trade Unions.
270	Translation Bureau.
274	Unfair Competition.
295	White Phosphorous Matches.
298	Yukon.
307	Canada Evidence.
Trade and Commerce—	
R.S.C. 1952 11	Atomic Energy Control.
25	Canada Grain.
44	Canadian Wheat Board.
64	Defence Supplies.
78	Department of Trade and Commerce.
92	Electrical and Photometric Units.
93	Electricity and Fluid Exportation.
94	Electricity Inspection.
103	Export.
105	Export Credits Insurance.
129	Gas Inspection.
140	Grain Futures.
147	Importation of Intoxicating Liquors.
Trade and Commerce—concl.	
R.S.C. 1952 153	Inland Water Freight Rates.
164	Length and Mass Units.
173	Maritime Coal Production Assistance.
191	National Trade Mark and True Labelling.
215	Precious Metals Marking.
239	Research Council.
257	Statistics.
292	Weights and Measures.
1952-53 27	Export and Import Permits.
Transport—	
	Auditors for National Railways (Annual).
	Canadian National Railways Financing and Guarantee (Annual).
R.S.C. 1927 29	Canadian National (West Indies) Steamship Company.
211	Railway Belt Water.
1929 4	Canadian National Railways Pensions.
11	Canadian National Refunding.
12	Canadian National Montreal Terminals.
48	Northern Alberta Railways.
1931 19, 20	Beauharnois Light, Heat and Power.
40	New Westminster Harbour Loan.
1940 20	Beauharnois Light, Heat and Power.
1947 26	Beauharnois Light, Heat and Power.
42	Port Alberni Harbour Commissioners.
1948 10	New Westminster Harbour Commissioners Refunding.
1950 1	Maintenance of Railway Operation.
R.S.C. 1952 2, 302	Aeronautics.
16	Bills of Lading.
20	Bridges.
29	Canada Shipping.
32	Canadian Broadcasting.
38	Canadian Maritime Commission.
39	Canadian National—Canadian Pacific.
40	Canadian National Railways.
42	Canadian Overseas Telecommunication Corporation.
45	Carriage by Air.
79	Department of Transport.
135	Government Harbours and Piers.
136	Government Railways.
137	Government Vessels Discipline.
153	Inland Water Freight Rates.
157	International Rapids Power Development.
168	Live Stock Shipping.
174	Maritime Freight Rates.
187	National Harbours Board.
193	Navigable Waters Protection.
202	Passenger Tickets.
211	Pipe Lines.

List of the Principal Acts of Parliament Administered by Departments of the Government of Canada—concluded

Department, Year and Chapter	Name of Act	Department, Year and Chapter	Name of Act
Transport—concl.		**Veterans Affairs**—concl.	
R.S.C. 1952 233	Radio.	R.S.C. 1952 51	Civilian War Pensions and Allowances.
234	Railway.	80	Department of Veterans Affairs.
242	St. Lawrence Seaway Authority.	117	Fire Fighters War Service Benefits.
262	Telegraphs.	207, 332	Pension.
268	Trans-Canada Air Lines.	256	Special Operators War Service Benefits.
271	Transport (Board of Transport Commissioners).	258	Supervisors War Service Benefits.
276	United States Wreckers.	279, 338	Veterans Insurance.
291	Water Carriage of Goods.	280	Veterans' Land.
311	Canadian National Railways Capital Revision.	281	Veterans Rehabilitation.
		289	War Service Grants.
Veterans Affairs—		297	Women's Royal Naval Services and the South African Military Nursing Service (Benefits).
1920 54	Returned Soldiers' Insurance.	340	War Veterans Allowances.
R.S.C. 1927 188	Soldier Settlement.	1952-53 27	Children of War Dead (Education Assistance).
1936 47	Veterans' Assistance Commission.		
62	Veterans Benefit.		
R.S.C. 1952 8	Allied Veterans Benefits.		

PART IV.—FEDERAL GOVERNMENT EMPLOYMENT

The Civil Service Commission.*—The Federal Civil Service comprises, in the widest sense, all servants of the Crown—other than those holding political or judicial office—who are employed in a civil capacity and whose remuneration is paid wholly and directly from moneys voted by Parliament. Collectively, they form the staffs of the various departments, commissions, boards, bureaux and other agencies of the Federal Government. Nearly every category of occupation is represented in the Civil Service. A few civil servants are appointed by one or both Houses of Parliament directly, a considerable number by departments and other agencies in accordance with the provisions of certain statutes, generally with executive approval of the Governor in Council, and the remainder—by far the majority—are selected and appointed by the Civil Service Commission of Canada.

The Civil Service Commission, as the central personnel agency of the Federal Government, is the custodian of the merit principle in respect of both initial appointments and promotions. The steps by which the Commission, in its present form, came to be constituted is the record of Civil Service reform in Canada which began a year after Confederation and culminated in the passing of the Civil Service Act of 1918.

Recruitment.—The recruitment of civil servants is conducted by means of open competitive examination through which every citizen has the right to compete for positions in the service of his country.

Examinations are held periodically as the staff requirements of the public service dictate. Any Canadian citizen may apply for headquarters positions open at Ottawa, but applicants for local positions must be residents of the locality in which the vacancy occurs. Competitive examinations are announced through the press and through posters displayed on the public notice boards of post offices, offices of the National Employment Service, offices of the Civil Service Commission, public libraries and elsewhere. The examinations may be written, oral, a demonstration of skill, or any combination of these.

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* Revised by M. M. Maclean, Secretary of the Civil Service Commission of Canada, Ottawa.

The names of persons successful in Civil Service examinations, arranged in order of rank, are recorded on eligible lists. Examination results are formally announced by publication in the *Canada Gazette* and each candidate—successful or unsuccessful—is advised of his standing. As required, appointments are made from the eligible lists, which usually remain valid for one year.

The rank of the various successful candidates on eligible lists is influenced by the 'veteran's preference'. Actually, the preference is limited largely, in accordance with its definition by law, to members of the Armed Forces who have served overseas in World War I or II or in the Korean theatre of operations. The highest order of preference is the 'disability preference' accorded to pensioners of the Armed Forces who, as a result of their war service, are unable to re-establish themselves in a civilian occupation.

In recent years, the Civil Service Commission has decentralized its operations and now has ten district offices and four sub-offices across the country. The Commission is granting an increasing measure of autonomy and responsibility to these offices to permit more efficient service to field agencies. They now conduct certain examinations that qualify for permanent as well as temporary employment.

Staff Training.—In 1947, the Commission set up a Staff Training Division to promote and guide a systematic service-wide training scheme. The training scheme, sponsored by the Commission, is a joint venture undertaken in co-operation with Federal Government departments, most of which have parallel training divisions. The Commission's Training Division is primarily a co-ordinating agent. It promotes and organizes activities, trains departmental instructors in the presentation of courses, prepares and, in some cases, gives courses of general application to all departments, publishes booklets and other training aids, assists departments in developing training to meet specialized needs, and acts as a general clearing-house for the exchange of information on training matters.

Promotion.—It is a prime objective of the Civil Service Act to create a career service. The result is that promotion, like entrance to the Service, is based on merit and a sound promotion system is developing. The present procedure involves the consideration of three factors: seniority or length of service; efficiency of candidates in their present positions; and fitness for the vacant positions. An automatic rating on seniority is given by the Commission and ratings on efficiency and fitness are provided by the department concerned. Appeal machinery, under Commission jurisdiction, has been set up for those employees who feel that their qualifications have not been properly assessed.

Position Classification and Compensation.—Provision is made in the Civil Service Act for the classifying of positions in the public service. A system of position-classification was instituted in 1919 and positions with like duties and responsibilities were classified alike and remunerated equally. Each position has a title, a set of tasks or duties which are proper to it in the organization in which it occurs and, arising out of these duties, a set of qualifications appropriate for their performance. Positions with duties of similar kind are grouped together under a common title to form a class, and grades within the class reflect the level of responsibility.

The determination of rates of compensation for each class is a continuing responsibility of the Commission and salary and wage surveys are conducted constantly. Position classification is a mainspring in the Commission's primary function of recruitment, involving the fixing of standards of qualification for each class of position.

Organization and Methods.—In recent years there has been an increasing awareness of the extent to which economical administration depends on the adoption of modern management techniques and devices. In 1948, the Commission set up an Organization and Methods Service to study problems of management in collaboration with officials directly responsible for major areas of administration. Briefly, this Service affords practical assistance to departments and other agencies of the Government through the systematic examination of structure, operations, procedures and work methods. Its growing facilities are offered, free of charge, to all departments.

Statistics of Federal Government Employment.*—Presented here are the first data of a new survey of Federal Government employment commencing April 1952.

The basic concept behind the survey was that it should comprehend all classes of employees (excluding members of the Armed Services but including Force members of the Royal Canadian Mounted Police) for the totality of services at the federal level of government, with separate treatment accorded those activities designated as "government enterprises" because of the economic or proprietary nature of their undertakings; hence the title "Federal Government Employment", in contrast to the title used for the previous survey "Civil Service of Canada" with its restrictions as to services and classes of employees. The guiding principle that has been followed in matters of terminology and presentation of data has been strict adherence, except in dealing with services of relatively minor import, to official usages as employed in the Canada *Estimates* and, in classification of employees, to the official designations "classified", "exempt" and "statutory". Comparison with figures of previous years should be made only after careful consideration of the differences in composition of services and classification of employees. These points are more fully elaborated in the *Explanatory Memorandum.*†

Included in this survey as governmental services are all the administrative functions of the Federal Government (*see* pp. 92-98), and all agencies, boards and commissions where the nature of the undertaking is not of a proprietary or economic character, but where payments of salaries and/or wages are by legislative appropriation from the General Revenue Fund, including two Agency Corporations (Federal District Commission and National Battlefields Commission) and one Proprietary Corporation (Canadian Farm Loan Board). Statutory employees are also included since salaries of these are paid from the General Revenue Fund in accordance with the terms of an Act of Parliament establishing the position.

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* Prepared in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

† Special report, available from DBS on request.

The "classified" group embraces several classes of employees including: those who are subject to the Civil Service Act and Civil Service Superannuation Act; those not subject to these Acts but who are employed under other enabling legislation or regulations; those employees of certain Agency and Proprietary Corporations mentioned above; and the "statutory" group, most of whom are only dismissable by an Address to both Houses of Parliament, such as members of the judiciary. The other main group, denominated "exempt", is also a composite of groups of employees (prevailing rate, casual, ships' crews), the chief distinctions of which are that, though paid from revenues passed by legislative appropriation, there is not the same security of tenure, the rates paid are determined by those prevailing in the area of work, and the employment of these groups is often seasonal. Moreover, these classes are not subject to the Civil Service Enactments for the purposes of classification and wages.

Employment of government "enterprises" is treated separately from that of government "services" because of the economic or proprietary complexion of the former activity. The supposition in respect of enterprises is that costs of operation, among them salaries and wages, are paid from the revenues which the undertaking has derived from the activity in which it is engaged. There is in these instances no such thing as a parliamentary appropriation to cover payment of salaries and wages; the accounts of such activities are separate and distinct from those for which the Auditor General is responsible but there exists in all instances ministerial responsibility to Parliament. The activities falling in the category "enterprises" are listed as follows:—

Atomic Energy of Canada Limited
Bank of Canada
Canadian Arsenals Limited
Canadian Broadcasting Corporation
Canadian National Railways
Canadian National (West Indies) Steamships Limited
Canadian Overseas Telecommunication Corporation
Canadian Wheat Board
Central Mortgage and Housing Corporation
Crown Assets Disposal Corporation
Canadian Commercial Corporation
Defence Construction Limited
Eldorado Mining and Refining Limited
Export Credits Insurance Corporation
Hudson Bay Railway
Industrial Development Bank
National Harbours Board
Northern Transportation Company Limited
Northwest Territories Power Commission
Polymer Corporation Limited
Prince Edward Island Car Ferry
Trans-Canada Air Lines

The figures pertaining to this group (Table 4) are published in aggregate only, in order to preclude (as required under the Statistics Act) any possibility of disclosure as to the operation of a particular enterprise.

1.—Classified and Exempt Employees of the Federal Government, by Month, Years Ended Mar. 31, 1953 and 1954

Note.—Includes departments, boards, commissions, etc., listed in Table 3, but excludes certain Federal Government enterprises, figures for which are given in Table 4.

Fiscal Year and Month	Total Classified	Exempt			
		Prevailing Rate	Casual	Ships' Crews	Total Exempt
	No.	No.	No.	No.	No.
1952-53—					
April	116,763	23,552	11,786	1,908	37,246
May	117,799	23,745	11,984	2,050	37,779
June	119,569	25,013	13,278	2,013	40,304
July	121,363	24,894	15,127	2,010	42,031
August	120,870	24,804	16,175	2,005	42,984
September	126,109[1]	19,690	15,963	1,918	37,571
October	128,162	19,032	14,727	1,702	35,461
November	129,040[2]	18,533	12,776	1,497	32,806
December	129,136	17,916	11,758	1,542	31,216
January	129,553	19,348	11,464	1,613	32,425
February	130,340	20,914[3]	10,378[4]	1,564	32,856
March	131,167	22,189	10,405	1,665	34,259
1953-54—					
April	130,999	22,154	10,912	1,955	35,021
May	131,057	23,667	11,728	2,130	37,525
June	131,482	23,428	12,726	2,158	38,312
July	131,627	25,602	16,001	2,197	43,800
August	131,835	23,615	15,178	2,072	40,865
September	131,714	23,692	14,955	2,050	40,697
October	132,714	23,048	14,212	2,145	39,405
November	134,163	22,290	12,807	2,192	37,289
December	135,009	22,717	11,654	2,025	36,396
January	135,411	22,465	12,358	1,874	36,697
February	135,884	22,245	10,861	1,770	34,876
March	137,270	20,414	11,261	2,601	34,276

[1] Includes 4,595 RCMP constables previously classified under Prevailing Rate. [2] Includes 337 statutory employees for the first time. [3] Includes, for the first time, 2,146 employees for services of Public Works not previously reported but for which there was an average of 2,211 persons for April 1952 to January 1953. [4] Includes, for the first time, 86 employees for services of Public Works not previously reported, but for which there was an average of 412 persons for April 1952 to January 1953.

2.—Earnings of Classified and Exempt Employees of the Federal Government, by Month, Years Ended Mar. 31, 1953 and 1954

Note.—Includes departments, boards, commissions, etc., listed in Table 3, but excludes certain Federal Government enterprises, figures for which are given in Table 4.

Fiscal Year and Month	Total Classified	Exempt				Additional Overtime Earnings[1]	
		Prevailing Rate	Casual	Ships' Crews	Total Exempt	Classified	Exempt
	$	$	$	$	$	$	$
1952-53—							
April	27,234,878	4,721,793	2,129,844	380,932	7,232,569	..	..
May	27,430,360	4,734,015	2,188,159	417,307	7,339,481	..	..
June	27,822,964	5,038,809	2,275,070	428,999	7,742,878	..	..
July	28,103,395	5,480,864	2,620,049	441,752	8,542,665	..	..
August	28,071,475	5,181,524	2,725,562	437,613	8,344,699	..	..
September	29,410,721[2]	4,076,940	2,692,089	417,894	7,186,923	..	..
October	30,214,691[3]	3,773,820	2,410,781	376,819	6,561,420	..	..
November	30,301,659	3,648,965	2,192,930	351,989	6,193,884	..	..
December	30,386,738	3,809,667	2,079,928	369,660	6,259,255	..	..
January	30,615,759	4,154,935	2,164,803	379,842	6,699,580	..	..
February	30,723,305	3,939,859[4]	1,904,944[5]	353,400	6,198,203	..	..
March	30,871,702	4,273,383	1,991,290	377,634	6,642,307	..	..

For footnotes, *see* end of table, p. 114.

2.—Earnings of Classified and Exempt Employees of the Federal Government, by Month, Years Ended Mar. 31, 1953 and 1954—concluded

Fiscal Year and Month	Total Classified	Exempt				Additional Overtime Earnings[1]	
		Prevailing Rate	Casual	Ships' Crews	Total Exempt	Classified	Exempt
	$	$	$	$	$	$	$
1953-54—							
April	30,909,319	4,520,126	1,933,437	494,905	6,948,468	8,187	125,923
May	30,879,035	4,865,220	2,007,985	480,207	7,353,412	217,767	171,884
June	30,950,340	4,614,133	2,183,216	493,170	7,290,519	86,482	378,262
July	31,177,008	5,262,904	2,831,831	512,049	8,606,784	227,247	273,878
August	31,334,757	4,633,538	2,604,647	478,446	7,716,631	214,301	139,994
September	31,381,574	4,874,808	2,701,864	475,811	8,052,483	157,668	207,569
October	31,836,865	4,781,467	2,582,383	508,400	7,872,250	225,816	266,304
November	31,881,163	4,854,869	2,355,074	529,046	7,738,989	120,147	229,516
December	32,123,778[6]	4,798,317	2,164,051	494,483	7,456,851	255,575	230,015
January	34,756,076[7]	4,506,934	2,010,388	467,649	6,984,971	253,761	273,169
February	34,819,104	4,461,519	1,961,051	428,373	6,850,943	1,386,940[8]	217,786
March	35,075,058	4,301,871	2,116,765	444,933	6,863,569	338,007	198,631

[1] Overtime earnings first reported April 1953.
[2] Includes $1,190,940 earned by 4,595 RCMP constables previously classified under Prevailing Rate.
[3] Includes earnings of 337 statutory employees for the first time.
[4] Includes, for the first time, earnings amounting to $168,226 for services of Public Works not previously reported, but for which there was an average of $190,018 for April 1952 to January 1953.
[5] Includes, for the first time, earnings amounting to $15,243 for services of Public Works not previously reported, but for which there was an average of $16,799 for April 1952 to January 1953.
[6] Excludes increases granted to classified employees, which were not available for December.
[7] Includes increases.
[8] Includes Post Office Christmas rush overtime payments.

3.—Federal Government Employment for the Month of March, 1953 and 1954, and Earnings for the Years Ended Mar. 31, 1953 and 1954, classified by Department and Principal Branch or Service

NOTE.—Excludes Federal Government enterprises, figures for which are given in Table 4.

Department, Branch or Service	1953				1954			
	Classified		Exempt		Classified		Exempt	
	Employees	Earnings	Employees	Earnings	Employees	Earnings	Employees	Earnings
	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Agriculture—								
General Services	212	644·0	21	93·1	221	651·5	19	68·0
Science Service	1,360	4,852·3	200	397·6	1,390	5,009·3	158	401·6
Experimental Farms Service	901	3,123·6	969	2,347·9	926	3,363·9	992	2,530·0
Production Service	1,584	5,159·6	34	77·3	1,581	5,537·3	71	155·2
Marketing Service	931	3,283·7	2	7·1	987	3,314·3	2	12·3
Rehabilitation Services (PFRA and MMRA, etc.)	442	1,708·0	636	1,581·7	474	1,644·8	692	2,059·9
Agricultural Prices Support Act	28	75·1	—	—	31	90·8	—	—
Totals, Agriculture	5,458	18,846·4	1,862	4,504·8	5,610	19,611·9	1,934	5,227·0
Auditor General's Office—								
General Services	144	539·8	—	—	140	549·6	—	—
Statutory[1]	1	6·2	—	—	1	15·0	—	—
Totals, Auditor General	145	546·1	—	—	141	564·6	—	—
Office of Chief Electoral Officer—								
General Services	21	73·1	—	—	19	93·3	—	—
Statutory[1]	1	4·3	—	—	1	12·0	—	—
Totals, Electoral Officer	22	77·4	—	—	20	105·3	—	—

For footnotes, *see* end of table, p. 118.

3.—Federal Government Employment for the Month of March, 1953 and 1954, and Earnings for the Years Ended Mar. 31, 1953 and 1954, classified by Department and Principal Branch or Service—continued

Department, Branch or Service	1953				1954			
	Classified		Exempt		Classified		Exempt	
	Employees	Earnings	Employees	Earnings	Employees	Earnings	Employees	Earnings
	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Citizenship and Immigration—								
General Services	71	203·1	—	24·1	85	248·4	—	—
Citizenship	102	264·7	—	—	107	287·6	—	—
Immigration Branch	1,559	4,546·5	375	155·6	1,520	4,772·8	383	468·2
Indian Affairs Branch—								
General Services	596	1,580·1	—	7·1	586	1,679·8	—	—
Schools—day and residential	591	1,511·3	115	107·2	626	1,595·7	125	128·6
National Gallery of Canada	26	127·4	—	—	30	100·6	—	—
Totals, Citizenship and Immigration	2,945	8,233·3	490	294·0	2,954	8,684·9	508	596·8
Civil Service Commission	578	1,606·9	—	—	570	1,758·7	—	—
Defence Production	1,678	4,743·8	—	—	1,522	4,901·3	—	—
External Affairs—								
General Services	594	1,817·7	—	—	629	1,833·8	—	—
Representation Abroad	416	1,487·8	365	484·7	411	1,734·2	414	628·3
International Joint Commission	20	84·6	—	—	20	90·3	—	—
Totals, External Affairs	1,030	3,390·2	365	484·7	1,060	3,658·3	414	628·3
Finance—								
General Services	503	1,438·5	—	—	496	1,489·0	—	—
Comptroller of the Treasury	4,130	10,643·4	—	—	4,145	10,891·0	—	—
Administration of Acts—								
Tariff Board	17	61·2	—	—	15	81·8	—	—
Royal Canadian Mint	226	721·0	—	—	215	735·2	—	—
Other	144	404·3	—	—	165	437·0	—	—
Halifax Relief Commission	6	16·2	7	25·2	5	13·7	8	22·7
Canadian Farm Loan Board	120	384·1	1	5·2	127	418·1	—	7·0
Commodity Prices Stabilization Corporation[2]	3	7·6	—	—	—	—	—	—
Totals, Finance	5,149	13,676·2	8	30·4	5,168	14,065·8	8	29·7
Fisheries—								
General Services	900	2,622·5	495	1,463·0	800	2,611·0	575	1,993·3
Fisheries Research Board	325	1,038·5	39	149·1	343	1,132·7	25	152·2
International Commissions	46	188·1	10	49·1	43	184·0	4	26·1
Newfoundland Fisheries Board	—	—	—	—	4	14·9	—	—
Newfoundland Bait Service	31	85·2	29	39·6	27	77·6	26	106·3
Totals, Fisheries	1,302	3,934·2	573	1,700·8	1,217	4,020·2	630	2,277·9
Governor General and Lieutenant-Governors—								
General Services	16	52·1	—	—	12	45·1	—	—
Statutory[1]	12	59·2	—	—	12	142·1	—	—
Totals, Governor General, etc	28	111·3	—	—	24	187·2	—	—
Insurance	94	342·6	—	—	94	362·0	—	—

For footnotes, *see* end of table, p. 118.

3.—Federal Government Employment for the Month of March, 1953 and 1954, and Earnings for the Years Ended Mar. 31, 1953 and 1954, classified by Department and Principal Branch or Service—continued

Department, Branch or Service	1953				1954			
	Classified		Exempt		Classified		Exempt	
	Employees	Earnings	Employees	Earnings	Employees	Earnings	Employees	Earnings
	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Justice—								
General Services	177	675·9	—	—	194	773·9	—	—
Administration of Courts	53	160·4	—	—	52	172·1	—	—
Statutory[1]	303	1,495·0	—	—	312	3,573·1	—	—
Office of the Commissioner of Penitentiaries	1,615	4,827·1	—	—	1,705	5,022·8	—	—
Totals, Justice	2,148	7,158·5	—	—	2,263	9,541·9	—	—
Labour—								
General Services	434	1,319·8	15	37·7	444	1,417·9	11	19·3
Annuities Act	177	437·5	1	4·7	173	436·4	17	11·0
Vocational Training Co-ordination	6	25·1	—	—	5	27·7	—	—
Unemployment Insurance Act	6,968	18,175·0	1,362	1,231·2	7,010	18,654·8	1,871	1,551·8
Totals, Labour	7,585	19,957·4	1,378	1,273·7	7,632	20,536·8	1,899	1,582·1
Legislation—								
Senate	92	287·8	64	115·6	92	295·5	69	78·5
House of Commons	676	1,471·4	—	—	687	1,482·3	—	—
Library of Parliament	22	90·6	23	48·2	23	98·9	26	65·1
Totals, Legislation	790	1,849·7	87	163·8	802	1,876·7	95	143·6
Mines and Technical Surveys—								
General Services	255	933·6	[3]	2·7[3]	272	956·7	[3]	[3]
Mines Branch	430	1,566·9	—	—	421	1,673·5	—	—
Geological Survey of Canada	244	916·9	[3]	76·5[3]	249	1,088·2	[3]	[3]
Surveys and Mapping Branch	748	2,553·6	[3]	88·1[3]	788	2,697·2	[3]	[3]
Dominion Coal Board	20	69·2	—	—	21	67·0	160	169·3
International Boundary Commission[4]	6	16·8	—	—	8	32·0	—	—
Totals, Mines and Technical Surveys	1,703	6,057·0	[3]	167·3[3]	1,759	6,514·6	160[3]	169·3[3]
National Defence—								
Administration and Inspection Services	2,733	6,313·3	—	—	3,102	8,058·0	—	—
Navy	4,832	10,331·5	4,362	11,736·0	5,471	12,940·5	4,177	14,197·9
Army	10,877	22,079·0	7,700	22,204·5	12,232	27,033·2	6,600	22,222·9
Air	4,695	9,189·4	5,228	11,905·4	6,854	13,832·1	4,783	13,083·2
Defence Research and Development	1,897	5,621·4	491	1,556·0	2,039	6,390·3	455	1,544·8
War Museum	5	18·1	—	—	5	18·4	—	—
Totals, National Defence	25,039	53,552·6	17,781	47,402·0	29,703	68,272·5	16,015	51,048·8
National Film Board	528	1,774·7	30	44·5	537	1,866·3	16	24·1
National Health and Welfare—								
General Services	281	726·2	—	14·2	367	963·5	39	52·6
National Health Branch—								
Immigration Medical Services	271	905·5	45	65·3	293	982·4	50	79·8
Indian and Eskimo Health Services	783	2,108·2	799	1,076·4	784	2,257·1	742	1,144·6
Other	574	1,885·2	34	40·5	563	2,054·4	32	75·8
Welfare Branch	924	2,185·2	16	34·7	867	2,179·9	—	3·3
Totals, National Health and Welfare	2,833	7,810·3	894	1,231·0	2,874	8,437·3	863	1,356·1

For footnotes, *see* end of table, p. 118.

3.—Federal Government Employment for the Month of March, 1953 and 1954, and Earnings for the Years Ended Mar. 31, 1953 and 1954, classified by Department and Principal Branch or Service—continued

Department, Branch or Service	1953				1954			
	Classified		Exempt		Classified		Exempt	
	Employees	Earnings	Employees	Earnings	Employees	Earnings	Employees	Earnings
	No.	$'000	No.	$'000	No.	$'000	No.	$'000
National Library	17	6·0	—	—	19	44·2	—	—
National Research Council and Atomic Energy Control Board	2,214	7,115·3	54	271·4	2,374	8,028·7	225	332·3
National Revenue—								
Customs and Excise Divisions	6,654	21,133·4	—	—	6,790	22,298·1	—	—
Taxation Division	6,772	19,308·4	—	—	7,253	19,971·1	—	—
Income Tax Appeal Board								
Administration Expenses	10	35·4	—	—	11	37·6	—	—
Statutory[1]	3	13·9	—	—	4	43·3	—	—
Totals, National Revenue	13,439	40,491·1	—	—	14,058	42,350·1	—	—
Post Office—								
General Services	250	655·0	—	—	288	877·0	—	—
Operations	18,560[5]	51,142·5[5]	[6]	[6]	18,978[5]	53,601·5[5]	[6]	[6]
Transportation	[7]	[7]	—	—	82	273·8	—	—
Financial Services	488	1,302·5	—	—	441	1,264·2	—	—
Totals, Post Office	19,298[5]	53,100·2[5]	—	—	19,789[5]	56,016·5[5]	—	—
Privy Council—								
Privy Council Office	107	349·0	—	—	103	364·2	—	—
Federal District Commission	27	119·8	238	666·2	39	145·4	262	839·2
Totals, Privy Council	134	468·8	238	666·2	142	509·6	262	839·2
Public Archives	62	224·0	—	—	59	217·6	—	—
Public Printing and Stationery	407	991·7	792	2,657·7	463	1,192·8	832	2,820·0
Public Works—								
General Services	159	429·8	—	—	310	707·2	—	—
Architectural Branch	3,301	7,222·0	2,959	1,272·6	3,326	7,486·9	2,908	3,636·5
Engineering Branch	538	1,847·4	638	2,725·7	556	2,018·4	697	3,238·1
Totals, Public Works	3,998	9,500·1	3,597	3,998·3	4,192	10,215·5	3,605	6,874·6
Northern Affairs and National Resources—								
General Services	127	408·1	5	14·6	110	394·4	—	11·9
National Parks Branch	504	1,203·5	539	1,875·6	479	1,235·9	588	2,878·5
Engineering and Water Resources Branch	352	1,263·3	21	193·0	301	1,273·6	26	198·4
Northern Administration and Lands Branch	223	669·9	78	33·6	232	721·4	92	105·5
Forestry Branch	412	1,225·6	55	154·7	355	1,295·9	64	182·8
Canadian Government Travel Bureau	86	216·2	—	—	88	218·5	—	—
Totals, Northern Affairs and National Resources	1,704	4,986·6	698	2,271·6	1,565	5,139·7	770	3,377·1

For footnotes, *see* end of table, p. 118.

3.—Federal Government Employment for the Month of March, 1953 and 1954, and Earnings for the Years Ended Mar. 31, 1953 and 1954, classified by Department and Principal Branch or Service—concluded

Department, Branch or Service	1953				1954			
	Classified		Exempt		Classified		Exempt	
	Employees	Earnings	Employees	Earnings	Employees	Earnings	Employees	Earnings
	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Royal Canadian Mounted Police—								
General Services	849	1,561·8	—	—	903	1,839·8	—	—
Other	4,724	8,580·2	396	6,873·8	4,748	15,110·1	461	1,075·2
Totals, Royal Canadian Mounted Police	5,573	10,141·9	396	6,873·8	5,651	16,949·9	461	1,075·2
Secretary of State	522	1,703·0	—	—	554	1,870·0	—	—
Office of the Custodian	72	288·4	—	—	54	263·7	—	—
Trade and Commerce—								
General Services	953	3,272·6	241	437·7	973	3,433·7	271	467·3
Dominion Bureau of Statistics	1,659	4,505·9	—	—	1,405	3,985·0	—	—
Board of Grain Commissioners	833	2,398·8	—	97·5	826	2,577·3	—	—
Canadian Government Elevators	169	364·9	69	83·5	170	482·4	54	165·4
Totals, Trade and Commerce	3,614	10,542·4	310	618·7	3,374	10,478·4	325	632·7
Transport—								
General Services	424	1,301·2	—	—	480	1,441·5	—	—
Canal Services	1,018	2,959·7	721	1,759·7	1,051	2,887·4	725	2,090·0
Marine Services	1,941	3,183·0	1,159	3,340·0	1,944	3,315·1	1,598	3,769·8
Air Services—								
Administration	240	566·3	—	259·7	63	467·5	—	—
Telecommunications	1,939	5,847·7	138	193·7	1,873	5,870·1	136	300·6
Meteorological Division	1,189	3,518·2	43	101·0	1,308	3,970·7	46	124·5
Civil Aviation Division	1,399	4,225·4	1,091	2,736·9	1,631	4,831·6	839	2,593·1
Air Transport Board	52	188·8	—	—	53	193·0	—	—
Board of Transport Commissioners—								
General Services	158	632·3	—	—	167	685·8	—	—
Statutory[1]	4	22·1	—	—	4	53·1	—	—
Canadian Maritime Commission	30	116·1	—	—	30	121·3	—	—
Totals, Transport	8,394	22,561·0	3,152	8,391·0	8,604	23,837·1	3,344	8,878·0
Veterans Affairs—								
General Services	2,756	8,089·8	2	4·5	2,657	7,817·8	—	4·4
Treatment Services	8,284	21,702·4	1,552	1,955·5	8,215	22,404·1	1,560	2,124·2
Canadian Pension Commission—								
General Services	434	1,425·1	—	—	415	1,467·2	—	—
Statutory[1]	14	54·2	—	—	14	130·0	—	—
Veterans' Land Act	1,176	3,796·5	—	—	1,125	3,824·7	—	—
Totals, Veterans Affairs	12,664	35,068·0	1,554	1,960·0	12,424	35,643·8	1,560	2,128·6
Grand Totals	**131,167**	**350,858·1**	**34,259**	**85,005·8**	**137,274**	**387,679·7**	**33,926**	**90,041·3**

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[1] First reported for November 1952. [2] First reported for October 1952. [3] Field parties of varying numbers of employees reported earnings of $947,736 and $987,981 for the years ended Mar. 31, 1953 and 1954, respectively. [4] First reported for August 1952. [5] In addition, earnings of a varying number of employees of post offices with annual revenues of less than $20,000 amounted to $15,728,959 and $15,962,851 for the years ended Mar. 31, 1953 and 1954, respectively. [6] Casual employees for the Christmas rush numbering 33,743 earned $1,651,650 in the year ended Mar. 31, 1953, and 36,070 earned $1,850,950 in the year ended Mar. 31, 1954. [7] Included under operations.

4.—Employees of Federal Government Enterprises[1] and Their Earnings, by Month, Years Ended Mar. 31, 1953 and 1954

Month	1952-53		1953-54	
	Employees	Earnings	Employees	Earnings
	No.	$	No.	$
April	140,433	35,547,548	145,394	39,009,033
May	142,969	37,264,865	148,583	41,180,717
June	146,628	36,891,749	152,295	41,669,967
July	149,122	38,944,678	155,177	41,606,734
August	149,541	38,005,750	156,865	42,013,127
September	146,499	36,973,769	156,061	41,777,157
October	144,094	37,610,974	151,997	40,832,615
November	141,444	35,275,011	146,633	39,020,850
December	143,544	39,458,900	144,125	39,612,047
January	142,709	36,964,380	143,477	38,017,438
February	145,048	38,497,242	144,900	40,104,523
March	143,438	37,665,412	139,473	38,165,250

[1] *See* text on p. 112.

PART V.—CANADA'S EXTERNAL RELATIONS

The growth of Canada's international status is reflected in the development of the Department of External Affairs. A review of the organization and development of that Department is given in the 1952-53 Year Book, pp. 101-104.

Section 1.—Diplomatic Representation as at July 31, 1954

NOTE.—For changes in this listing subsequent to July 31, 1954, *see*, *Canadian Representatives Abroad and Representatives of Other Countries in Canada*, published quarterly and obtainable from the Queen's Printer, Ottawa. Price, 25 cents.

1.—Canadian Representation Abroad

Country and Year Representation Established	Present Status of Representative	Address	Present Representative	Date Letter of Credence Presented
Argentina........1941	Ambassador........	Bartolome Mitre, 478, Buenos Aires.	MAJOR - GENERAL THE HON. L. R. LAFLÈCHE, D.S.O.	Aug. 19, 1952
Australia........1939	High Commissioner	State Circle, Canberra..	MR. W. A. IRWIN.......	Aug. 7, 1953
Austria..........1952	Minister............	Strauchgasse 1, Vienna..	MR. GEORGE L. MAGANN	(nominated)
Belgium.........1939	Ambassador........	35, rue de la Science, Brussels.	MR. CHARLES PIERRE HÉBERT.	Jan. 14, 1954
Brazil...........1941	Ambassador........	Avenida President Wilson, 165, Rio de Janeiro.	MR. SYDNEY D. PIERCE, O.B.E.	Oct. 27, 1953
Ceylon..........1953	High Commissioner	6 Gregory's Road, Cinnamon Gardens, Colombo.	MR. J. J. HURLEY, O.B.E., E.D.	Aug. 5, 1953
Chile............1942	Ambassador........	Avenida General Bulnes 129, Santiago.	MR. LEON MAYRAND....	May 17, 1951
Colombia........1953	Ambassador........	Rm. 613 Edificio Faux, Avenida Jimenez de Quesada 7-25, Bogota.	MR. E. TURCOTTE.......	Apr. 7, 1953
Cuba............1945	Ambassador........	Edificio Ambar Motors, Avenida Menocal No. 16, Havana.	MR. H. A. SCOTT........	Jan. 15, 1952

1.—Canadian Representation Abroad—continued

Country and Year Representation Established	Present Status of Representative	Address	Present Representative	Date Letter of Credence Presented
Czechoslovakia..1943	Chargé d'Affaires *ad interim.*	Krakowska 22, Prague, 2	Mr. G. Bernard Summers.	Mar. 29, 1954
Denmark........1946	Minister............	4 Trondhjems, Copenhagen.	Mr. E. D. McGreer...	Apr. 4, 1952
Finland..........1949	Minister............	Borgmästarbrinken 3-C.32, Helsinki.	Mr. W. D. Matthews..	Oct. 29, 1952
France...........1928	Ambassador........	72 avenue Foch, Paris XVI.	Mr. Jean Désy, Q.C....	Jan. 19, 1954
Germany........1950	Ambassador........	Zittelmann Strasse 22, Bonn.	Mr. C. S. A. Ritchie...	May 25, 1954
Greece...........1943	Ambassador........	31, avenue Vassilissis Sofias, Athens.	Mr. T. W. L. MacDermot.	(nominated)
Iceland..........1949	Minister............	c/o Canadian Legation, Fridtjof Nansens Plass 5, Oslo, Norway.	Mr. Chester A. Ronning.	July 22, 1954
India............1947	High Commissioner	4 Aurangzeb Road, New Delhi.	Mr. E. Reid...........	Nov. 14, 1952[1]
Indonesia........1953	Ambassador........	Tanah Abang Timur No. 2, Djakarta.	Mr. G. R. C. Heasman, O.B.E.	June 2, 1953
Ireland..........1940	Ambassador........	92 Merrian Square West, Dublin.	Hon. W. F. A. Turgeon, Q.C.	July 17, 1950
Italy............1947	Ambassador........	Via Saverio Mercadante 15, Rome.	Mr. P. Dupuy, C.M.G..	June 13, 1952
Japan............1929	Ambassador........	16 Omote - Machi, 3 Chrome, Minato - Ku, Tokyo.	The Hon. R. W. Mayhew, P.C.	Jan. 15, 1953
Luxembourg.....1945	Minister............	c/o Canadian Embassy, 35, rue de la Science, Brussels, Belgium.	Mr. Charles Pierre Hébert.	Jan. 16, 1954
Mexico...........1944	Ambassador........	Edificio Internacional, Paseo de la Reforma, No. 1, Mexico City.	Mr. Jules Léger.......	Oct. 23, 1953
Netherlands.....1939	Ambassador........	Sophialaan 1A, The Hague.	Mr. T. A. Stone.......	Sept. 15, 1952
New Zealand....1940	High Commissioner	Government Life Insurance Bldg., Customs Quay, Wellington.	Mr. E. H. Norman.....	July 21, 1953
Norway.........1943	Minister............	Fridtjof Nansens Plass 5, Oslo.	Mr. Chester A. Ronning.	Apr. 24, 1954
Pakistan.........1950	Acting High Commissioner.	Metropole Hotel, Victoria Road, Karachi.	Mr. J. H. Cleveland...	Mar. 17, 1954.
Peru.............1944	Ambassador........	Edificio Boza, Plaza San Martin, Lima.	Mr. E. Vaillancourt...	Sept. 27, 1950
Poland...........1943	Chargé d'Affaires *ad interim.*	31 Ulica Katowicka, Saska Kepa, Warsaw.	Mr. T. LeM. Carter...	May 8, 1952
Portugal.........1952	Minister............	Avenida da Praia da Vitoria No. 48 - 1°, D°, Lisbon.	Hon. W. F. A. Turgeon, Q.C.	Feb. 6, 1952
Spain............1953	Ambassador........	Edificio Espana Avenida de José Antonio 88, Madrid.	Lt.-Gen. Maurice Pope, C.B., M.C.	Dec. 10, 1953

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[1] Date of assumption of duties.

1.—Canadian Representation Abroad—continued

Country and Year Representation Established	Present Status of Representative	Address	Present Representative	Date Letter of Credence Presented
Sweden..........1947	Minister............	Strandvagen 7-C, Stockholm.	Mr. W. D. Matthews..	Nov. 8, 1952
Switzerland......1947	Minister............	88 Kirchenfeldstrasse, Berne.	Mr. George L. Magann	Apr. 13, 1954
Turkey..........1947	Ambassador........	Mudafaai Hukuk Caddesi, No. 19, Cankaya, Ankara.	Mr. H. O. Moran, O.B.E.	Dec. 30, 1952
Union of South Africa. 1940	High Commissioner	24 Barclays Bank Bldg., Church Square, Pretoria.	Mr. E. W. T. Gill......	July 16, 1954
Union of Soviet Socialist Republics. 1943	Ambassador........	23 Starokonyushenny Pereulok, Moscow.	Mr. John B. Watkins...	Mar. 16, 1954
United Kingdom. 1880	High Commissioner	Canada House, Trafalgar Square, London, S.W.1.	Mr. N. A. Robertson..	June 1, 1952[1]
United States of America. 1927	Ambassador........	1746 Massachusetts Avenue, Washington, D.C.	Mr. Arnold D. P. Heeney, Q.C.	Aug. 3, 1953
Uruguay.........1952	Ambassador........	Victoria Plaza Hotel, Montevideo.	Major - General The Hon. L. R. LaFlèche, D.S.O.	Jan. 9, 1953
Venezuela........1952	Ambassador........	Edificio Pan-American, Puente Urapal, Candelaria, Caracas.	Mr. H. G. Norman, C.M.G.	Jan. 15, 1953
Yugoslavia......1943	Ambassador........	Proliterskih Brigada 69, Belgrade.	Mr. J. S. Macdonald...	Oct. 23, 1951

OTHER MISSIONS

Canadian Military Mission (1946).	Head of Mission....	Perthshire Block, Olympic Stadium, Headquarters Berlin, (British Sector).	Mr. C. S. A. Ritchie...	May 28, 1954
Canadian Delegation to the North Atlantic Council (1952) and Organization for European Economic Co-operation (1950).	Representative.....	77, rue d'Auteuil, Paris XVI.	Mr. L. Dana Wilgress.	Aug. 1, 1953
Permanent Delegation of Canada to the United Nations (1948).	Permanent Delegate	Rm. 504, 620 Fifth Ave., New York 20, N.Y.	Mr. David M. Johnson.	Nov. 14, 1951
Permanent Delegation of Canada to European Office of the United Nations (1948).	Permanent Delegate	La Pelouse, Palais des Nations, Geneva.	Mr. Hector Allard....	Nov. 20, 1953

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[1] Date of assumption of duties.

1.—Canadian Representation Abroad—concluded

Country and Year Representation Established	Present Status of Representative	Address	Present Representative
		CONSULATES	
Brazil...........1947	Consul..............	Rua 7 de Abril 252, Saõ Paulo.	—
United States of America. 1948	Acting Consul General.	532 Little Bldg., 80 Boylston St., Boston 16, Mass.	Mr. J. L. Delisle.
“ 1947	Consul General.....	Suite 800, Daily News Bldg., 400 W. Madison St., Chicago 6, Ill.	Mr. D. S. Cole.
“ 1948	Consul..............	1035 Penobscot Bldg., Detroit 26, Mich.	—
“ 1953	Consul General.....	Associated Realty Bldg., Los Angeles, Cal.	Mr. Leslie G. Chance, C.B.E. M.C.
“ 1952	Consul..............	201 International Trade Mart Bldg., New Orleans, La.	Mr. G. A. Newman.
“ 1943	Consul General.....	620 Fifth Ave., New York, N.Y.	Hon. Ray Lawson, O.B.E.
“ 1947	Honorary Vice-Consul.	443 Congress St., Portland, Maine.	Mr. A. Lafleur.
“ 1948	Consul General.....	400 Montgomery St., San Francisco 4, Cal.	Mr. C. C. Eberts.
“ 1953	Consul General.....	1407 Tower Bldg., 7th Ave. at Olive Way, Seattle, Wash.	Mr. C. Norman Senior.
Republic of the Philippines. 1949	Consul General.....	Ayala Bldg., Juan Luna St., Manila.	Mr. F. H. Palmer, M.C.

2.—Representation of Other Countries in Canada

Country and Year Representation Established	Present Status of Representative	Address	Present Representative
Argentina.........1941	Ambassador........	193 Sparks Street, Ottawa....	His Excellency Dr. Lucas Mario Galigniana.
Australia.........1940	High Commissioner	100 Sparks Street, Ottawa....	His Excellency Sir Douglas Copland, K.B.E., C.M.G.
Austria...........1952	Chargé d'Affaires *ad interim.*	445 Wilbrod Street, Ottawa...	Dr. Walther Peinsipp.
Belgium..........1937	Ambassador........	168 Laurier Avenue East, Ottawa.	His Excellency Fernand Muûls.
Brazil............1941	Ambassador........	102 Carling Avenue, Ottawa...	His Excellency Heitor Lyra.
Chile.............1942	Ambassador........	Suite 215, 56 Sparks Street, Ottawa.	His Excellency General Teodoro Ruiz Diez.
China............1942	Ambassador........	201 Wurtemburg Street, Ottawa.	His Excellency Liu Chieh.
Colombia........1953	Ambassador........	Apt. 16, The Roxborough, Ottawa.	His Excellency Carlos Martinez-Aparicio.
Cuba.............1945	Ambassador........	400 Holland Avenue, Ottawa..	His Excellency Delfin H. Pupo y Proenza.

2.—Representation of Other Countries in Canada—continued

Country and Year Representation Established	Present Status of Representative	Address	Present Representative
Czechoslovakia...1942	Chargé d'Affaires *ad interim.*	171 Clemow Avenue, Ottawa..	Mr. Jaroslav Skacil.
Denmark.........1946	Minister............	451 Daly Avenue, Ottawa.....	His Excellency O. Sehested.
Dominican Republic. 1954	Ambassador........	Chateau Laurier Hotel, Ottawa.	His Excellency Rafael Paino Pichardo.
Finland..........1948	Chargé d'Affaires...	140 Wellington Street, Ottawa.	Mr. H. R. Martola.
France...........1928	Ambassador........	42 Sussex Street, Ottawa......	His Excellency Hubert Guerin.
Germany.........1951	Ambassador........	580-582 Chapel Street, Ottawa.	His Excellency Dr. Werner Dankwort.
Greece...........1942	Ambassador........	Chateau Laurier Hotel, Ottawa.	His Excellency Raoul Bibica-Rosetti.
Iceland...........1948	Minister............	Chateau Laurier Hotel, Ottawa.	His Excellency Thor Thors.
India.............1947	High Commissioner	200 MacLaren Street, Ottawa.	His Excellency R. R. Saksena.
Indonesia.........1953	Ambassador........	160 Metcalfe Street, Ottawa...	His Excellency Dr. Usman Sastroamidjoyo.
Ireland...........1939	Ambassador........	140 Wellington Street, Ottawa.	His Excellency Sean Murphy.
Israel.............1953	Minister............	45 Powell Avenue, Ottawa....	His Excellency Michael Saul Comay.
Italy.............1947	Ambassador........	384 Laurier Avenue East, Ottawa.	His Excellency Corrado Baldoni.
Japan.............1928	Ambassador........	88 Metcalfe Street, Ottawa....	His Excellency Koto Matsudaira.
Luxembourg......1949	Minister............	Chateau Laurier Hotel, Ottawa.	His Excellency Hugues Le Gallais.
Mexico...........1944	Chargé d'Affaires *ad interim.*	88 Metcalfe Street, Ottawa....	Dr. Ignacio D. Silva.
Netherlands......1939	Ambassador........	12 Marlborough Avenue, Ottawa.	His Excellency A. H. J. Lovink.
New Zealand.....1942	High Commissioner	107 Wurtemburg Street, Ottawa.	His Excellency T. C. A. Hislop, C.M.G.
Norway..........1942	Minister............	140 Wellington Street, Ottawa.	His Excellency Erling S. Bent.
Pakistan.........1949	High Commissioner	505 Wilbrod Street, Ottawa...	His Excellency Mirza Osman Ali Baig.
Peru..............1944	Ambassador........	539 Island Park Drive, Ottawa	His Excellency German Fernandez-Concha.
Poland...........1942	Chargé d'Affaires...	183 Carling Avenue, Ottawa...	Mr. E. Markowski.
Portugal..........1952	Minister............	285 Harmer Avenue, Ottawa..	His Excellency Dr. Luis Esteves Fernandes.
Spain.............1953	Ambassador........	149 Daly Avenue, Ottawa.....	His Excellency Mariano de Yturralde y Orbegoso.
Sweden...........1943	Minister............	720 Manor Road, Rockcliffe Park, Ont.	His Excellency Dr. Klas Böök.
Switzerland......1946	Minister............	5 Marlborough Avenue, Ottawa.	His Excellency Dr. Victor Nef.

2.—Representation of Other Countries in Canada—concluded

Country and Year Representation Established	Present Status of Representative	Address	Present Representative
Turkey...........1944	Ambassador........	197 Wurtemburg Street, Ottawa.	His Excellency Ahmet Cavat Ustün.
Union of South Africa. 1938	High Commissioner	9 Rideau Gate, Ottawa.......	His Excellency Wentzel Christoffel du Plessis.
Union of Soviet Socialist Republics. 1942	Ambassador........	285 Charlotte Street, Ottawa.	His Excellency Dmitri S. Chuvahin.
United Kingdom..1928	High Commissioner	Earnscliffe, Ottawa..........	His Excellency Lieut.-General Sir Archibald Nye, G.C.S.I., G.C.M.G., G.C.I.E., K.C.B., K.B.E., M.C.
United States of America. 1927	Ambassador........	100 Wellington Street, Ottawa.	His Excellency R. Douglas Stuart.
Uruguay..........1948	Ambassador........	36 Marlborough Avenue, Ottawa.	His Excellency Dr. Cyro Giambruno.
Venezuela........1953	Ambassador........	Chateau Laurier Hotel, Ottawa.	His Excellency Fernando Paz Castillo.
Yugoslavia.......1942	Ambassador........	17 Blackburn Avenue, Ottawa.	His Excellency Dr. Rajko Djermanovic.

Section 2.—International Activities*

Subsection 1.—Canada and Commonwealth Relations, 1953-54†

One of the most important of Commonwealth relations, that of almost continuous consultation between Commonwealth countries on international issues, continued in many forms throughout 1953. The exchanges of views that are conducted with the minimum of formality and organization, although unspectacular, are an invaluable and vital part of Commonwealth relations.

The flexible nature of the constitutional arrangements between member countries and the continuous process of evolution to which they are subject was manifested in a change in the Royal Style and Titles. It had been agreed at a meeting of Commonwealth Prime Ministers at London in December 1952 that Her Majesty's title, though retaining a common element, might vary according to the country concerned. The Title adopted by Canada was embodied in a Statute passed by the Parliament of Canada in February 1953, which was presented to Her Majesty for approval and signature on May 28. For Canada, the Royal Style and Title is now "Elizabeth the Second, by the grace of God of the United Kingdom, Canada and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith". The Canadian Proclamation was simultaneous with the Proclamations by the other Commonwealth countries. The common element of the new titles is the recognition of the Queen as Head of the Commonwealth. This is symbolic of the common history, ideals and interests which bind the countries of the Commonwealth together as a free association of independent member nations.

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* Prepared by the Department of External Affairs, Ottawa.

† Brought up to Mar. 31, 1954. Refer to the 1954 Year Book, pp. 103–107, for activities up to May 31, 1953.

The Coronation of Queen Elizabeth II, which brought together representatives of the Parliaments and Legislatures of the Commonwealth from all over the world, provided a striking occasion for the demonstration of the strength of that feeling which binds together the diverse nations and peoples of the Commonwealth. The Canadian delegation to the Coronation included the Prime Minister and other Cabinet Ministers, Leaders of the Opposition in the House of Commons and the Senate, Speakers of the Senate and the House of Commons, the Chief Justice, and representatives of Canadian ex-servicemen's organizations. Arrangements for the Coronation were co-ordinated by the Coronation Commission, consisting of representatives of Commonwealth countries meeting at London. In Canada, the Government was advised by the Coronation Committee of Canada on all Coronation matters of special concern to this country. At posts abroad, Canadian diplomatic and consular representatives united with their colleagues from other Commonwealth nations in arranging celebrations.

Following the Coronation, Commonwealth Prime Ministers held a series of meetings at which they reviewed the international situation and held informal talks on matters of particular interest to two or more countries. The communique issued at the end of the meetings stated: "The discussions which the Prime Ministers have held have once more demonstrated the concord which exists between all the Governments and peoples of the Commonwealth, despite their varying interests and circumstances, in their approach to problems of the world today."

These meetings continued a long series of exchanges that have taken place through the years. Previous meetings had discussed such important matters as peace settlements, developments in China and Korea, and economic problems.

One outstanding example of practical Commonwealth co-operation continued in Korea, where the Commonwealth Division, consisting of combat forces from the United Kingdom, Canada, Australia and New Zealand, and a medical unit from India, which had acquitted itself with distinction, was maintained on guard after the Armistice of July 27, 1953. The nations of the Commonwealth, like many other members of the United Nations, have been concerned over the destruction of life and property in Korea, and are contributing to its relief and rehabilitation.

In respect of economic matters, although difficulties caused by the shortage of raw materials abated, other problems persisted. The most important continued to be the financial difficulties of the Sterling Area, which raised urgent questions for all members of the Commonwealth, not excepting Canada, the only non-sterling member. At a meeting of Commonwealth Finance Ministers held at London in January 1952, measures to meet the situation were discussed and important steps were later initiated by the countries concerned to arrest further deterioration in their own positions. In November of that year, the Prime Ministers of the Commonwealth countries reviewed the position and produced a plan for a collective approach to freer trade and payments. Their proposals were later discussed with the United States and Western European Governments. During the period under review, substantial progress in the position of the Sterling Area was achieved. Progress is reflected in an improvement in the balance of payments, the expansion of trade, and an expansion of development schemes. In January 1954, Commonwealth Finance Ministers meeting at Sydney, Australia, reviewed the existing position in the light of these developments and re-affirmed their faith in the collective approach to freer trade and payments.

A continuing and deep-rooted economic problem arises out of the backward agricultural and industrial condition of many countries of southeast Asia. It was realized that, if ignored, this condition, worsened by the destruction and impoverishment in that area during World War II, would undermine the promise that these countries achieve a healthy and continuous development along democratic lines. The 1950 Colombo Conference, therefore, urged the necessity of the more industrially advanced countries giving assistance to the nations of that area, and fashioned the Colombo Plan, which continues to play an active part as one of the most promising contributions towards building up the free world and enabling it to stand against totalitarianism.

International tension, besides adversely affecting the world's economic development during recent years, has also made it necessary to devote to strengthening the defences of Commonwealth countries resources that would normally have been used to increase trade and prosperity. The world-wide distribution of the Commonwealth countries has made essential the organization of their defences on a regional basis providing for full co-operation with friendly foreign countries. For example, Canada and the United Kingdom, as members of the North Atlantic Treaty Organization, have continued to work together in co-operation with the other members of NATO.

Commonwealth co-operative arrangements also exist in other fields. Canada is represented on such standing groups as: the Executive Council of the Commonwealth Agricultural Bureaux; the Commonwealth Economic Committee; the Commonwealth Shipping Committee; the Commonwealth Telecommunications Board; the Commonwealth Air Transport Council; the Commonwealth Advisory Aeronautics Research Council; the Commonwealth Liaison Committee; the Commonwealth Committee on Mineral Resources and Geology; the Imperial Institute; and the Imperial War Graves Commission. These bodies form useful means of exchanging information and views on special economic, scientific or technical questions and of working out recommendations for the consideration of the governments concerned.

Canada's first High Commissioner to Ceylon arrived at Colombo in August 1953, thus completing the nation's diplomatic representation in Commonwealth countries.

Constitutional developments in United Kingdom colonial territories attracted some attention during 1953. These included a conference at London on federation in the West Indies, the establishment of the Federation of Rhodesia and Nyasaland, and progress towards more complete self-government in Nigeria, the Gold Coast, and other colonial territories.

Despite difficulties and problems the Commonwealth association has, during the period covered by this survey, continued to serve as one of the most effective means of international discussion and co-operation, based in large measure on common traditions, similar political institutions and common ideals.

Subsection 2.—Canada and the United Nations

The most important development in the period Apr. 1, 1953 to Mar. 31, 1954, was the conclusion of a Korean Armistice on July 26, 1953. The armistice agreement was a document signed by military commanders and was intended to establish provisions of the armistice and make possible a final peace settlement. Commenting on the signing of the Armistice, the Prime Minister of Canada paid tribute to the

Armed Forces of the United Nations that had fought in Korea and recalled that a brigade of Canadian soldiers, as well as three destroyers of the Royal Canadian Navy and elements of the Royal Canadian Air Force, had been in operation since early in the fighting. He described Canada's attitude to the Korean situation as follows:—

> "When in the summer of 1950 the United Nations intervened in Korea, it did so for the sole purpose of resisting aggression against the Republic of Korea. This objective has now been achieved. An armistice drawn up in honourable terms has now been signed. It is the earnest hope of the Canadian Government that this armistice in Korea will be observed scrupulously by all concerned and will lead to a political settlement in that ravaged peninsula and eventually to a general settlement of outstanding issues in the whole of the Far East."

The Hon. L. B. Pearson, President of the seventh session of the General Assembly, announced the convening of the General Assembly to prepare for the calling of the political conference recommended in the armistice terms. This political conference was to deal with "the withdrawal of foreign forces from Korea, the peaceful settlement of the Korean question, etc.". The armistice agreement established a military demarcation line separating the two sides, and it called for the creation of a Military Armistice Commission to supervise the implementation of the agreement and of a Neutral Nations Supervisory Commission to supervise the movement of men and goods on both sides and to investigate violations.

When the Assembly met in August 1953, much of its time was devoted to a resolution sponsored by Canada, the United Kingdom, Australia and New Zealand, recommending the participation of India in the political conference. This resolution did not have sufficient support to pass at the plenary meeting stage and, at the request of India, was withdrawn. A principal resolution passed reaffirmed that "the objectives of the United Nations remained the achievement by peaceful means of a unified, independent and democratic Korea under a representative form of government and the full restoration of international peace and security in the area".

To arrange a political conference, the United States sent a number of messages to the Peking and North Korean régimes. In late October, discussions on the proposed political conference began at Panmunjom. These discussions, involving the time, place and composition of the proposed conference as well as the status of Soviet participation, were broken off on Dec. 12 over accusations made by the Communist side against the United States.

The prisoners held by the Neutral Nations Repatriation Commission were released to the United Nations Command just prior to Jan. 23, 1954, and, on that date, they were declared to be free men. India proposed that the General Assembly be reconvened to consider the Korean question but there were not sufficient member states in favour for the proposal to obtain the requisite majority. Canada notified the Secretary-General and the Indian Government that it thought reconvening of the General Assembly in the existing circumstances was inadvisable.

The next major development in the Korean question came at the conclusion of the meeting of the Foreign Ministers of the United States, the United Kingdom, France and the Soviet Union at Berlin, Germany, in mid-February. In a communique they announced that agreement had been reached on a conference opening at Geneva, Switzerland, on Apr. 26, 1954, of representatives of the Big Four, the Peking régime, the two Koreas and other countries whose armed forces had participated in the Korean conflict. At the close of the period under review, Canada had agreed to participate in this conference and general preparations were going forward.

The General Assembly, 1953-54.—Although most of the Korean developments took place outside the United Nations proper during this period, the eighth session of the General Assembly, which opened in mid-September and recessed early in December 1953, was concerned with a range of important problems. At the opening of the Assembly, the Hon. L. B. Pearson, as Chairman of the Canadian Delegation, said that the Assembly was meeting at a time when many thought that the successful negotiation of some of the outstanding differences between the two major power groupings might be possible. This possibility, he said, arose mainly from the fact that in recent years a large part of the free democratic world had learned to co-operate in purpose, policy and action for the defence of peace. As it turned out, the eighth session of the Assembly was somewhat of a transitional stage between the conclusion of a Korean armistice and whatever international relationships were to be established in its wake. It could not be said that the eighth session was marked by any basic change in Soviet attitudes. Acrimonious debate took place on several questions influenced by East-West tensions. These included: reports of Communist atrocities in Korea, the fate of World War II prisoners, and charges of bacteriological warfare and forced labour. The Assembly also considered the problems of Chinese representation, on which it postponed decision, and admission of new members on which no further decision was made.

The eighth session concerned itself also with a number of problems relating to the progress of certain areas toward self-government. A highly controversial issue in this field—and one that was much to the fore in debates on the situation in Tunisia and Morocco—was the extent to which the duty of the United Nations, under the Charter, to concern itself with questions of human rights and self-determination of peoples should have a bearing on the interpretation of Charter provisions which place domestic matters outside the Assembly's competence. Canada has long held the view that the domestic jurisdiction clause should not be so interpreted as to render meaningless other important provisions of the Charter, and that the Assembly's essential role should be to develop goodwill on both sides from which agreed solutions might be achieved.

One or more Commonwealth countries were involved in three important items on the agenda: treatment of Indians in South Africa; racial policies in South Africa, and the status of South West Africa. On the first, the Assembly reconstituted the Good Offices Commission which in the past had vainly endeavoured to arrange negotiations between the parties concerned. The Assembly's decision on racial policies involved the re-affirmation of previous resolutions concerning human rights and fundamental freedoms and the re-establishment of the Commission set up in 1952 to study this problem. On these two issues, Canada made clear its concern regarding allegations that human values were being disregarded, and joined with those seeking solutions that would be in keeping with the importance attached to human rights in the Charter and yet would not represent too broad an interpretation of the domestic jurisdiction clause.

The question of disarmament received careful attention at the Assembly. Under a resolution approved by 54 members (including Canada), with none against and only the Soviet bloc abstaining, the Disarmament Commission was asked to continue its work with a view to ending the deadlock between the Western Powers and the Union of Soviet Socialist Republics. Interest in the problem was greatly heightened at the conclusion of the eighth session by a proposal put forward by President Eisenhower that governments principally involved should make contributions of fissile materials to an international agency for peaceful purposes. In connection with this proposal, the President specifically endorsed the Assembly resolution that called for the establishment of a special sub-committee of the Disarmament Commission consisting of representatives of the powers principally involved, which would seek in private an acceptable solution to disarmament problems. The Prime Minister of Canada welcomed the President's "imaginative and constructive approach to what is perhaps the greatest problem of the day". Subsequently, the Big Four Foreign Ministers agreed at the Berlin Conference in mid-February upon a declaration to the effect that the solution of international controversies would be aided by agreement on disarmament and that an exchange of views along the lines of the General Assembly resolution should be held. Meetings for this purpose were convened some weeks later. Canada is a member of the Disarmament Commission and was also appointed to the sub-committee.

Canada shared in the Assembly decision to renew the Expanded Program of Technical Assistance to which she had given a total of $2,400,000, including a contribution of $800,000 for 1953. For 1954 a recommendation was made to Parliament that up to $1,500,000 be contributed to the Program, subject to adequate amounts being given by other countries. Attention was also given to the related problems of increasing the flow of public and private capital for financing economic development. In accordance with a suggestion put forward by the United States, member states of the United Nations, including the United Kingdom and Canada, undertook to ask their peoples, when sufficient progress had been made in internationally supervised world-wide disarmament, to devote a portion of the resulting savings to a United Nations Fund for Economic Development. Decisions were also taken about various other important programs including reconstruction work in Korea, relief and rehabilitation for Palestine refugees, welfare programs for mothers and children under the United Nations Children's Fund (which was established on a continuing basis) and the work of the United Nations High Commissioner for Refugees. To all of these, Canada has made contribution of considerable size.

The Assembly discussed possible preparations for consideration to be given in 1955 to a conference to review the United Nations Charter and instructed the Secretary-General to undertake certain tasks in this direction. Canada took the position that there might be some benefit in re-examining the Charter but that, in the present international climate, unwarranted hopes of reduction in international tensions through changes in the Charter should not be encouraged.

The Palestine Problem.—Beginning in the autumn of 1953, the Security Council was concerned with problems relating to the Palestine question. In late 1953 and early 1954, various armed clashes took place between Israel and its neighbours and feelings ran very high. There was a resulting impairment of the machinery for maintaining peaceful conditions that had been established with the signing of the armistice agreements between Israel and her individual Arab neighbours. At the end of the period under review, the Security Council had on its agenda items relating to alleged attacks, and also was considering whether or not to review the Palestine problem in general. The Security Council also gave brief attention to the Trieste question. Canada was not a member of the Security Council during this period but followed developments very closely.

Economic and Social Affairs.—Through the Economic and Social Council and its related bodies, the United Nations continued to help promote higher standards of living and to concern itself with international problems in the economic, social and health fields. Many of the issues in the fields of technical assistance, aid for refugees, child welfare and a number of others were handled initially in the Economic and Social Council and then passed to the Assembly for final decision.

In the early part of 1954, the Commission on Human Rights passed an important milestone in its work by completing the two international draft Covenants on Human Rights that had been under consideration for five years. One of the draft Covenants is on civil and political rights and the other on economic, social and cultural rights. Canada made clear in a statement on the Covenants that, "in the absence of a satisfactory federal-state clause, Canada could not become a party to the Covenants owing to the nature of its Constitution which divides legislative powers concerning human rights between the national parliament and the provincial legislatures". The possibility existed, however, that the next session of the General Assembly would decide to include a reservations clause in the Covenants.

Specialized Agencies.—Closely linked with the work of the Economic and Social Council in the Technical Assistance Program and in other fields have been the undertakings of the ten Specialized Agencies. These are separate intergovernmental bodies that work in close harmony with the United Nations. Canada has ratified the Convention for an Intergovernmental Maritime Consultative Organization (IMCO) which will concern itself with technical matters relating to international shipping. It is expected that this body will come into being at an early date.

Despite the many vicissitudes, Canada's support of the United Nations remained strong. The Secretary of State for External Affairs, the Hon. L. B. Pearson, summed this up on United Nations Day as follows:—

> "We have learned in the long hard years since the Charter was signed that it is easier to produce a blueprint than to complete a structure for peace. The United Nations has had failures and disappointments, but it has also had its achievements—political, economic, social and humanitarian. The achievements should hearten us, and the difficulties become a challenge which should spur us to greater effort in the cause of international co-operation for peace and progress."

Subsection 3.—Canada and the North Atlantic Treaty

Within less than two years of the end of World War II in 1945 and the establishment of the United Nations, people's hopes of a lasting peace gave place to growing anxiety. The United Nations Security Council, which had been given responsibility for maintaining world-wide security, was deliberately prevented by the Soviet representatives from fulfilling this function. The Soviet Union maintained its armed forces after the war at a level that insured to itself a preponderance of military strength in Europe. The Soviet Government blocked attempts by the Western Powers to reach a peace settlement in Europe and Communist Parties were used as an instrument of Soviet policy to sabotage Western European efforts at economic recovery and political co-operation. Under these circumstances, the countries of the Atlantic Community felt themselves in grave peril of Soviet aggression and Communist subversion and they therefore took special collective measures under the United Nations Charter to maintain peace. The Prime Minister of Canada, the Rt. Hon. Louis Stephen St. Laurent, was one of the first to foresee this development. In 1947, when Secretary of State for External Affairs, he said before the United Nations General Assembly that nations might be forced to seek greater safety "in an association of democratic, peace-loving states willing to accept more specific international obligations in return for a greater measure of national security".

The first step in this direction was taken in the spring of 1948 when Belgium, France, Luxembourg, The Netherlands and the United Kingdom signed the Brussels Treaty establishing Western Union. On Apr. 4, 1949, as a result of negotiations between these countries, Canada and the United States, the North Atlantic Treaty was signed at Washington. This Treaty was accepted by all major groups of opinion in Canada and was passed without a single dissenting vote in Parliament.

The original signatories of the Treaty were Belgium, Canada, Denmark, France, Iceland, Italy, Luxembourg, The Netherlands, Norway, Portugal, the United Kingdom and the United States. In September 1951 it was agreed that Greece and Turkey should be invited to accede to the Treaty and they were admitted in February 1952. In May 1952, on the same day the European Defence Community Treaty was signed at Paris by Belgium, France, Italy, Luxembourg, The Netherlands and Western Germany, a Protocol to the North Atlantic Treaty was signed under which all NATO countries extended to the members of the EDC the guarantees of the North Atlantic Treaty in return for reciprocal obligations to be undertaken by all members of the EDC. As of May 31, 1954, this Protocol has been ratified by the United States, Turkey, Portugal, Greece and The Netherlands. The Canadian Parliament approved it in June 1952 but ratification was postponed while awaiting the action of other governments, more immediately concerned, regarding it.

The North Atlantic Treaty and the Organization.—The terms of the Treaty and the organization of the Council and subordinate committees are dealt with in the 1954 Canada Year Book, pp. 113-115.

Annual Review.*—The North Atlantic Council continued in permanent session at Paris under the chairmanship of the Secretary-General, Lord Ismay. In 1953, Mr. A. D. P. Heeney was succeeded by Mr. L. D. Wilgress as Permanent Representative of Canada to the Council. The Council met in Ministerial Session in September 1953 and April 1954 under the Chairmanship of M. Bidault, French Foreign Minister.

At the September meeting the Council, after reviewing the defence program of the member countries, reached agreement on the level of NATO forces to be achieved and maintained over the next three years; the goals for the end of 1954 were firm commitments while those for 1955 and 1956 were provisional and for planning purposes. The broad lines of future NATO defence planning to meet the threat of aggression over an extended period were agreed upon. The Ministers also had a full exchange of views on the international situation both in formal and in informal discussions. They concluded, first, that there was no real evidence that the basically hostile Soviet policy that had brought NATO into being had been abandoned and, second, that the policy of the NATO countries must therefore be to pursue the twin aims of building the defensive and economic strength and the political unity of the Atlantic Community while at the same time seeking to negotiate on outstanding differences wherever possible.

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* June 1, 1953, to May 31, 1954.

The meeting in April 1954 was attended by the Foreign Ministers of member governments and its primary purpose was to examine the current international situation and the implications for NATO of recent developments. The Ministers found no evidence that the ultimate aims of the Soviet Union had altered and they therefore agreed, in view of the increasing military strength of the Soviet Union and its satellites, upon the need for continuing efforts, vigilance and unity. The Ministers also adopted, on a Canadian proposal, a procedure designed to develop further the habit of political consultation in the Council. The Council expressed its gratification at the far-reaching steps that had been taken by the United Kingdom and the United States, in public declarations made earlier that month, to ensure close and enduring co-operation with the European Defence Community.

In February 1954, the Council appointed Admiral Jerauld Wright, U.S.N., as Supreme Allied Commander Atlantic to succeed Admiral Lynde D. McCormick.

Canadian Contributions to NATO.—Canada continued in 1953-54 to support NATO with contributions of armed forces to the unified NATO commands, with end-item assistance to other NATO countries and with financial contributions to common budgets.*

The 27th Canadian Infantry Brigade Group in Germany was replaced during 1953 by the 1st Canadian Infantry Brigade Group. The Canadian air contribution of 12 jet fighter squadrons to SACEUR† was completed in 1953 ahead of schedule. The Canadian contribution of 42 vessels to SACLANT‡ remained unchanged.

For the year ended Mar. 31, 1953, a total of $324,000,000 was appropriated for Mutual Aid and for 1953-54 Parliament was asked to approve an appropriation of $300,000,000. Under this program such items as ammunition, military vehicles, radar and radio apparatus, minesweepers and jet aircraft were furnished to other NATO countries both from reserve stocks and, in increasing proportion, direct from current production. In addition, airmen from NATO countries were trained in Canada as part of the Mutual Aid Program. By the end of 1953, 925 pilots and 1,605 navigators from Belgium, Denmark, France, Italy, Norway and the United Kingdom had completed training under this scheme; 965 trainees, including airmen from Turkey and Portugal, were undergoing training in early 1954 and it was planned to offer training for 1,200 airmen each year over the next three years.

The 1953-54 estimates provided for expenditures of $15,150,000 to cover Canada's share of the cost of NATO common infrastructure programs during the year, $1,750,000 for Canada's contribution to the budgets of the NATO Military Headquarters, and $183,000 for the Canadian contribution to the budget of the NATO Civilian Headquarters.

Subsection 4.—Canada and the Colombo Plan

The Colombo Plan for Co-operative Economic Development in South and Southeast Asia was conceived at the Commonwealth Meeting on Foreign Affairs held at Colombo, Ceylon, Jan. 9-14, 1950. Although the Colombo Plan was initiated by Commonwealth governments, it is not exclusively a Commonwealth program. It is designed to assist in the economic development of all countries and territories in the general area of south and southeast Asia.

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* Contributions made in 1952-53 are given in the 1954 Year Book, pp. 115-116.
† Supreme Allied Commander Europe.
‡ Supreme Allied Commander Atlantic.

The Consultative Committee, an intergovernmental body which meets from time to time to review the progress of the Colombo Plan and to consider policy matters in connection with its implementation, now counts as members Australia, Burma, Cambodia, Canada, Ceylon, India, Indonesia, Laos, Nepal, New Zealand, Pakistan, the United Kingdom (and its territories in the area, such as Malaya, Singapore and Sarawak) and Viet-Nam, as well as the United States which is also engaged in a substantial program of economic aid in the same region. To develop the technical assistance side of the Plan, a Council for Technical Co-operation has been set up at Colombo to which Canada has appointed a permanent representative. The Technical Co-operation Program, though an integral part of the Colombo Plan, is designed to supplement the technical assistance activities of the United Nations and the specialized agencies in the area.

Up to Mar. 31, 1954, the Canadian Parliament approved annual contributions totalling $76,600,000 for capital and technical assistance to governments in south and southeast Asia. The Estimates submitted to Parliament for 1954-55 include provision for a further contribution of $25,400,000.

Capital assistance has so far been provided to India, Pakistan and Ceylon. The Canadian contribution has consisted primarily of direct assistance to various development projects (e.g., power-generating plant, transportation equipment, fishing boats, and surveys of resources). It has also included goods required in these countries which the recipient governments have been able to use as a means of raising some of the money needed to meet local costs of development programs (e.g., wheat, flour, copper, aluminum, and equipment required by state governments or public corporations). Canadian aid has been helping these countries in both ways, to develop their economies and raise their standards of living.

Under the Technical Assistance Program up to Mar. 31, 1954, about 177 persons had been received for training in Canada in a great variety of technical fields and 46 Canadian experts had been retained for service in Colombo Plan countries in such fields as fisheries, refrigeration, marine biology, agriculture, soil erosion, vocational training and the maintenance of tractors and agricultural machinery.

The Consultative Committee on the Colombo Plan held its fifth meeting at New Delhi, India, in October 1953, which was attended by a Canadian delegation led by the Hon. James Sinclair, Minister of Fisheries. A published Report* outlines the progress made so far and indicates the plans for the future. It contains separate sections describing the activities of each member of the Colombo Plan as either contributing or receiving countries.

The annual Policy Session of the Council for Technical Co-operation was also held at New Delhi during October. Its survey of developments in the technical assistance field is appended to the report of the Consultative Committee.

At the invitation of the Canadian Government, the next meetings of the Consultative Committee and of the Council for Technical Co-operation will be held at Ottawa in the autumn of 1954.

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* Obtainable from the Queen's Printer, Ottawa.

CHAPTER III.—POPULATION*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The records accumulated at the decennial censuses of Canada since Confederation in 1867 to the latest census of 1951 make a valuable contribution to the demographic history of the nation. Each successive decade has added to the vast scope of the material; the detailed statistical analyses and the numerous monographs and studies available under the several aspects of demography and agriculture have made the census a most important statistical measure of accomplishment and progress. An outline of the history of the census is given in the 1947 Year Book, pp. 96-97.

The main legal reason for a periodic census under the constitution of Canada is to determine representation in the House of Commons; this, according to the British North America Act, is based on population (*see* pp. 61-62). The payment of provincial subsidies on a per capita basis is adjusted annually on population estimated from census data. In view of this, each person is counted as belonging to the locality of his regular domicile rather than to the place where he may be at the date of enumeration.

The modern nation-wide census, however important this redistribution purpose, has a much wider sphere of usefulness. It constitutes, through the data collected directly from the people, a true measure of the social and economic progress of the country and can, therefore, be used in the regulation and general administration of public affairs, social security, rehabilitation programs, etc.

Basic figures from the 1951 Census have been summarized under the respective headings of this Chapter. More detailed information and extended analyses may be obtained from Census publications.

Section 1.—Growth of the Population

The population history of Canada, from the first census in 1666 when 3,215 persons were enumerated to the 1951 Census when the figure was 14,009,429, reveals an outstanding rate of population growth. Each decade, of course, contributed to this growth but the ten-year periods 1901-11, 1911-21 and 1941-51 merit particular mention. In the decade 1901-11, Canada's population increased by 34·2 p.c., the largest growth in the nation's history. Immigration was the main factor in this gain, 1,800,000 persons having entered the country during the period. Despite World War I with its accompanying population losses through casualties, emigration and the wartime influenza epidemic, Canada's population increased by 21·9 p.c. in the 1911-21 decade.

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* This Chapter has been revised in the Census (Demography) Division, Dominion Bureau of Statistics.

The Census of 1951 showed the population of Canada to be 14,009,429, representing an increase of 2,502,774 or 21·8 p.c. over the 1941 figure of 11,506,655. Newfoundland's entry into Confederation accounted for 361,416 of this increase. Excluding Newfoundland, the population in 1951 totalled 13,648,013, an increase of 2,141,358 or 18·6 p.c. over the 1941 population of the nine provinces and the territories. This numerical increase was the largest on record and the percentage increase was exceeded only in the 1901-11 and 1911-21 decades. The population increase in the 1941-51 decade is all the more remarkable when consideration is given to the fact that immigration was greatly restricted during the war years. With the resumption of immigration in the post-war years, however, Canada had a net gain of about 424,000 in population through immigrant arrivals over the decade. The period was characterized also by high birth rates, and the natural increase was just under 2,000,000 for the ten-year period.

1.—Numerical and Percentage Distribution of Population, by Province, Decennial Census Years 1871-1951

Note.—The populations of the Prairie Provinces in 1906, 1916, 1926, 1936 and 1946 are shown in the 1951 Year Book, p. 131. Intercensal estimated populations from 1867-1904 will be found in the 1936 Year Book, p. 141; from 1905-30 in the 1946 edition, p. 127; from 1932-40 in the 1952-53 edition, p. 143; and from 1942-54 in Table 2, p. 137, of the present edition.

Province or Territory	1871	1881	1891	1901	1911	1921	1931	1941	1951
					Numerical Distribution				
N'f'ld........	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	361,416
P.E.I.........	94,021	108,891	109,078	103,259	93,728	88,615	88,038	95,047	98,429
N.S..........	387,800	440,572	450,396	459,574	492,338	523,837	512,846	577,962	642,584
N.B..........	285,594	321,233	321,263	331,120	351,889	387,876	408,219	457,401	515,697
Que..........	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776	2,360,510	2,874,662	3,331,882	4,055,681
Ont..........	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,933,662	3,431,683	3,787,655	4,597,542
Man..........	25,228	62,260	152,506	255,211	461,394	610,118	700,139	729,744	776,541
Sask..........	...	...	...	91,279	492,432	757,510	921,785	895,992	831,728
Alta..........	...	...	...	73,022	374,295	588,454	731,605	796,169	939,501
B.C..........	36,247	49,459	98,173	178,657	392,480	524,582	694,263	817,861	1,165,210
Yukon........	...	...	...	27,219	8,512	4,157	4,230	4,914	9,096
N.W.T........	48,000	56,446	98,967	20,129	6,507	8,143	9,316	12,028	16,004
Canada....	**3,689,257**	**4,324,810**	**4,833,239**	**5,371,315**	**7,206,643**	**8,787,949**[2]	**10,376,786**	**11,506,655**	**14,009,429**
					Percentage Distribution				
N'f'ld........	...	...	...	...	...	...	...	...	2·58
P.E.I.........	2·55	2·52	2·25	1·92	1·30	1·01	0·85	0·83	0·70
N.S..........	10·51	10·19	9·32	8·56	6·83	5·96	4·94	5·02	4·59
N.B..........	7·74	7·43	6·65	6·16	4·88	4·41	3·94	3·97	3·68
Que..........	32·30	31·42	30·80	30·70	27·83	26·86	27·70	28·96	28·95
Ont..........	43·94	44·56	43·74	40·64	35·07	33·39	33·07	32·92	32·82
Man..........	0·68	1·44	3·16	4·75	6·40	6·94	6·75	6·34	5·54
Sask..........	...	...	...	1·70	6·84	8·62	8·88	7·79	5·94
Alta..........	...	...	...	1·36	5·19	6·70	7·05	6·92	6·71
B.C..........	0·98	1·14	2·03	3·33	5·45	5·97	6·69	7·11	8·32
Yukon........	...	...	...	0·51	0·12	0·05	0·04	0·04	0·06
N.W.T........	1·30	1·30	2·05	0·37	0·09	0·09	0·09	0·10	0·11
Canada....	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**	**100·00**

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[1] Populations of Newfoundland (which was not part of Canada until 1949) were: 1871, 152,500 (estimated); 1881, 186,500 (estimated); 1891, 202,040; 1901, 220,984; 1911, 242,619; 1921, 263,033; 1931, 281,500 (estimated); 1941, 303,300 (estimated); and 1945, 321,819.

[2] Includes 485 members of the Royal Canadian Navy recorded separately in 1921.

Section 2.—Intercensal Estimates and Movement of Population

Intercensal estimates of the population have many uses. They constitute a base for vital statistics rates, per capita figures of production and trade, and other analyses. More recently, they have proved useful for estimates of labour force and other population characteristics of data collected in sample surveys.

Estimates are constructed in the first place for the total population of Canada and for each province. It is a requirement that these be made available about the date to which they apply, June 1 of each year. As final figures on the components of population changes are not ready at that date, the numbers of births, deaths and immigrants are partly filled in by extrapolation so that a preliminary figure is secured for the June to May interval. To avoid a cumulative error the calculation, in effect, starts anew with the latest preceding census for each year's estimates and uses the most up-to-date figures then available. To the census figures are added the births of the intervening years and the deaths are subtracted. Immigrants are added and emigrants are subtracted. On the last item of this calculation there is least information; it is possible to ascertain from United States immigration figures the number of Canadians entering the United States and sometimes the number of those going to the United Kingdom but data are not available for other countries.

The program of population estimates calls for two figures to be given in respect of each year: one based on preliminary materials, as described above, necessarily involving an extrapolation of birth, death and immigration returns, and the other on final figures subject to no further change. The latter can be made available only when the last item of information has been secured and this last item is the succeeding decennial census. With the release of the 1951 Census totals, the estimates were revised for the decade 1941-51.

Since estimates for successive years are independently calculated back to the latest census, the best estimate of the balance of population change is not obtained by subtracting the figure for one year from that for the year following. Much interest attaches to the year-to-year balance and the following statement is presented, which gives all available data on that point.

Year	*Calendar-Year Data*[1]				*Estimated Population as at June 1*[1]
	Births	*Deaths*	*Natural Increase*	*Immigration*	
1941	**255,317**	**114,639**	**140,678**	**9,329**	**11,490,000**
1942	272,313	112,978	159,335	7,576	11,637,000
1943	283,580	118,635	164,945	8,504	11,778,000
1944	284,220	116,052	168,168	12,801	11,929,000
1945	288,730	113,414	175,316	22,722	12,055,000
1946	330,732	114,931	215,801	71,719	12,268,000
1947	359.094	117,725	241,369	64,127	12,527,000
1948	347,307	119,384	227,923	125,414	12,799,000
1949	366,139	124,047	242,092	95,217	13,423,000
1950	371,071	123,789	247,282	73,912	13,688,000
1951	**380,101**	**125,454**	**254,647**	**194,391**	**13,984,000**
1952	402.527	125,950	276,577	164,498	14,405,000[2]
1953	416,825	127,381	289,444	168,868	14,756,000[2]

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[1] Exclusive of the Yukon and Northwest Territories. Newfoundland included from 1949.

[2] Subject to adjustment as later data are made available.

2.—Estimates of Population, by Province, Intercensal Years 1941-54

Note.—At every census the previous post-censal estimates, made at June 1 each year, are adjusted to the newly recorded population figures. Figures for all provinces for 1941 and 1951 and for the Prairie Provinces for 1946 are census figures. Figures for 1867-1904 will be found in the 1936 Year Book, p. 141, for 1905-30 in the 1946 edition, p. 127, and for 1931-40 in the 1952-53 edition, p. 143.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada[1]
	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000	'000
1941	...	**95**	**578**	**457**	**3,332**	**3,788**	**730**	**896**	**796**	**818**	**5**	**12**	**11,507**
1942	...	90	591	464	3,390	3,884	724	848	776	870	5	12	11,654
1943	...	91	606	463	3,457	3,915	723	838	785	900	5	12	11,795
1944	...	91	611	461	3,500	3,963	727	836	808	932	5	12	11,946
1945	...	92	619	467	3,560	4,000	727	833	808	949	5	12	12,072
1946	...	94	608	478	3,629	4,093	**727**	**833**	**803**	1,003	8	16	12,292
1947	...	94	615	488	3,710	4,176	739	836	825	1,044	8	16	12,551
1948	...	93	625	498	3,788	4,275	746	838	854	1,082	8	16	12,823
1949	345	94	629	508	3,882	4,378	757	832	885	1,113	8	16	13,447
1950	351	96	638	512	3,969	4,471	768	833	913	1,137	8	16	13,712
1951	**361**	**98**	**643**	**516**	**4,056**	**4,598**	**776**	**832**	**939**	**1,165**	**9**	**16**	**14,009**
1952	374	103	653	526	4,174	4,766	798	843	970	1,198	9	16	14,430
1953	383	106	663	536	4,269	4,897	809	861	1,002	1,230	9	16	14,781
1954	398	105	673	547	4,388	5,046	828	878	1,039	1,266	10	17	15,195

[1] Estimates for Newfoundland prior to union with Canada, which took place on Mar. 31, 1949, are not included in Canada totals.

The traditional movement of population on the North American Continent from east to west has not been apparent in Canadian statistics for recent years. The most spectacular changes are shown in the Prairie Provinces and in Britist Columbia. The three Prairie Provinces lost by migration about 250,000 people between 1931 and 1941 and somewhat more from 1941 to 1951. British Columbia gained at the rate of about 8,000 a year during the 1930's and at about 23,000 a year during the 1940's. On an absolute basis, Ontario received more people than British Columbia but in relation to its larger population this growth was only one-third as important. Quebec's net change was negligible relative to its population. Nova Scotia gained during the 1930's but lost in the 1940's, the Maritime Provinces as a whole losing considerably over the two decades.

3.—Numerical Changes in the Populations of the Provinces through Interprovincial Migration, 1931 to 1941 and 1941 to 1951

Province	1931 to 1941	1941 to 1951
	No.	No.
Prince Edward Island	−3,000	−12,000
Nova Scotia	+8,000	−39,000
New Brunswick	−10,000	−42,000
Quebec	−2,000	−12,000
Ontario	+77,000	+305,000
Manitoba	−48,000	−61,000
Saskatchewan	−158,000	−199,000
Alberta	−42,000	−7,000
British Columbia	+82,000	+231,000

Section 3.—Density of Population

The land area and density of the population per square mile is given by province in Table 4 for the census years 1921-51. It will be noted that the figures for 1951 include the Province of Newfoundland, and this fact should be kept in mind in comparisons with earlier censuses.

4.—Land Areas and Density of Population, by Province, Decennial Census Years 1921-51

Province or Territory	Land Area in Sq. Miles	Population, 1921		Population, 1931		Population, 1941		Population, 1951	
		Total	Per Sq. Mile	Total	Per Sq. Mile	Total	Per Sq. Mile	Total	Per Sq. Mile
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland[1]	147,994	...	...	...	...	...	...	361,416	2·44
Prince Edward Island	2,184	88,615	40·57	88,038	40·31	95,047	43·52	98,429	45·07
Nova Scotia	20,743	523,837	25·25	512,846	24·72	577,962	27·86	642,584	30·98
New Brunswick	27,473	387,876	14·12	408,219	14·86	457,401	16·65	515,697	18·77
Quebec	523,860	2,360,510	4·51	2,874,662	5·49	3,331,882	6·36	4,055,681	7·74
Ontario	348,141	2,933,662	8·43	3,431,683	9·86	3,787,655	10·88	4,597,542	13·21
Manitoba	219,723	610,118	2·78	700,139	3·19	729,744	3·32	776,541	3·53
Saskatchewan	220,182	757,510	3·44	921,785	4·19	895,992	4·07	831,728	3·78
Alberta	248,800	588,454	2·37	731,605	2·94	796,169	3·20	939,501	3·78
British Columbia	359,279	524,582	1·46	694,263	1·93	817,861	2·28	1,165,210	3·24
Canada (Exclusive of the Territories)	**2,118,379**	**8,775,164**	**4·45**[2]	**10,363,240**	**5·26**[2]	**11,489,713**	**5·83**[2]	**13,984,329**	**6·60**[3]
Yukon Territory	205,346	4,157	0·02	4,230	0·02	4,914	0·02	9,096	0·04
Northwest Territories	1,253,438	8,143	0·01	9,316	0·01	12,028	0·01	16,004	0·01
Canada	**3,577,163**	**8,787,949**[4]	**2·56**[5]	**10,376,786**	**3·03**[5]	**11,506,655**	**3·36**[5]	**14,009,429**	**3·92**[3]

[1] Includes Labrador. [2] Calculated on the basis of 1,970,385 sq. miles which excludes the land area of Newfoundland. [3] Includes Newfoundland. [4] Total includes 485 members of the Royal Canadian Navy recorded separately in 1921. [5] Calculated on the basis of 3,429,169 sq. miles which excludes the land area of Newfoundland.

Section 4.—Rural and Urban Population

Before 1951, the population residing within the boundaries of all incorporated cities, towns and villages of a province was classified by the Census as urban and the remainder as rural. Since the laws governing incorporation vary among provinces there was no uniform line of demarcation between the rural and urban population throughout Canada. In the 1951 Census, the aggregate size of population within a given area rather than provincial legal status was the main criterion for the rural-urban classification. The population residing in cities, towns and villages of 1,000 or over, whether incorporated or unincorporated, as well as the population of all parts of census metropolitan areas was defined as urban and that outside such localities as rural.

Table **5** presents the rural and urban population, by province or territory, for 1951. The rural is further classified by farm and non-farm residence and the urban by size of locality.

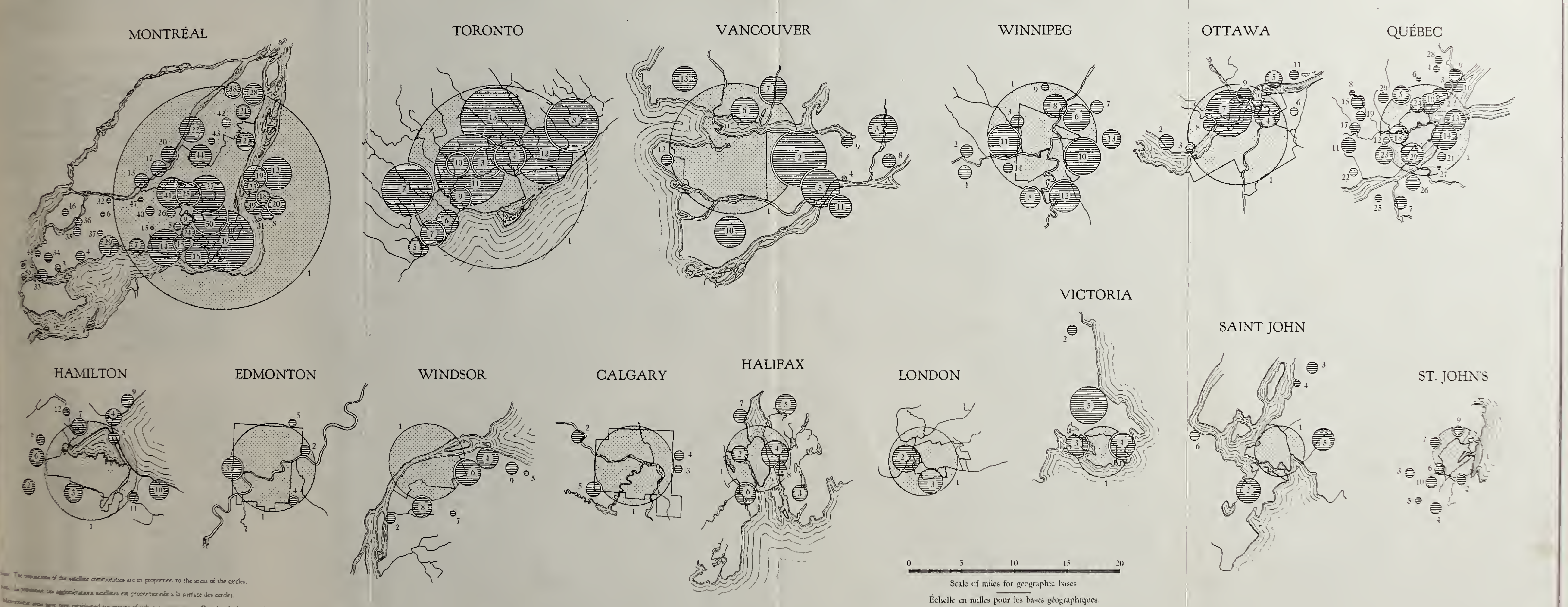
5.—Rural Population classified by Farm and Non-farm, and Urban Population classified by Size Group, by Province, Census 1951

Province or Territory	Rural			Urban				
	Farm[1]	Non-farm	Total	1,000 to 9,999	10,000 to 29,999	30,000 to 99,999	100,000 or Over	Total[2]
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	15,456	191,165	206,621	100,375	—	52,873	—	154,795
P. E. Island	46,757	26,987	73,744	8,798	15,887	—	—	24,685
Nova Scotia	112,135	185,618	297,753	166,121	61,802	116,906	—	344,831
New Brunswick	145,771	154,915	300,686	86,906	76,430	50,779	—	215,011
Quebec	766,910	591,453	1,358,363	750,436	504,523	247,548	1,185,536	2,697,318
Ontario	678,043	668,400	1,346,443	714,343	463,404	764,448	1,307,751	3,251,099
Manitoba	214,435	122,526	336,961	93,965	109,036	—	235,710	439,580
Saskatchewan	398,279	180,979	579,258	86,379	41,504	124,587	—	252,470
Alberta	339,955	149,871	489,826	120,700	39,311	—	288,691	449,675
British Columbia	109,919	261,820	371,739	157,333	180,240	109,707	344,833	793,471
Yukon Territory	44	6,458	6,502	2,594	—	—	—	2,594
N.W.T.	28	13,252	13,280	2,724	—	—	—	2,724
Canada	**2,827,732**	**2,553,444**	**5,381,176**	**2,290,674**	**1,492,137**	**1,466,848**	**3,362,521**	**8,628,253**

[1] Excludes 84,264 persons living on farms in localities classed as urban. [2] Includes a few metropolitan area parts with fewer than 1,000 population.

THE FIFTEEN METROPOLITAN AREAS* OF CANADA (SHOWING CITY PROPER AND SATELLITE COMMUNITIES) CENSUS OF 1951

LES QUINZE ZONES MÉTROPOLITAINES* DU CANADA (CITÉ PROPREMENT DITE ET AGGLOMÉRATIONS SATELLITES) RECENSEMENT DE 1951


MONTRÉAL
TORONTO
VANCOUVER
WINNIPEG
OTTAWA
QUÉBEC
VICTORIA
SAINT JOHN
HAMILTON
EDMONTON
WINDSOR
CALGARY
HALIFAX
LONDON
ST. JOHN'S
0
5
10
15
20
Scale of miles for geographic bases
Échelle en milles pour les bases géographiques.

Note: The populations of the satellite communities are in proportion to the areas of the circles.

Nota: La population des agglomérations satellites est proportionnée à la surface des cercles.

*Metropolitan areas have been established for groups of urban communities in Canada which are in close economic, geographic and social relationship.

*Les zones métropolitaines ont été établies pour certains groupes d'agglomérations urbaines du Canada qui sont en étroites relations économiques, géographiques et sociales.

For lists of satellite communities see reverse side   Voir la liste des agglomérations [illegible]

HALIFAX	133,931
1. Halifax, city proper—cité proprement dite	85,589
2. Armdale and Fairview Settlement Area	5,386
3. Cole Harbour and Eastern Passage Area	4,747
4. Dartmouth, t.—v.	15,037
5. Dartmouth Lakes Area	8,231
6. Herring Cove and Spryfield Area	8,415
7. Rockingham and Bedford Area	3,666
8. Woodside and Imperoyal Area	2,858
9. Indian Reserves—Réserves indiennes	2

LONDON	121,516
1. London, city proper—cité proprement dite	95,343
2. London, twp. (pt.)—cant. (part.)	14,829
3. Westminster, twp. (pt.)—cant. (part.)	11,344

VICTORIA	104,303
1. Victoria, city proper—cité proprement dite	51,331
2. Central Saanich District Municipality	2,069
3. Esquimalt District Municipality	10,153
4. Oak Bay District Municipality	11,960
5. Saanich District Municipality	28,481
6. Indian Reserves—Réserves indiennes	309

SAINT JOHN	78,337
1. Saint John, city proper—cité proprement dite	50,779
2. Lancaster, par.	12,320
3. Rothesay, par.	2,557
4. Rothesay, vl.	896
5. Simonds, par.	10,005
6. Westfield, par.	1,780

ST. JOHN'S	67,749
1. St. John's, city proper—cité proprement dite	52,873
2. Blackhead Section	1,622
3. Freshwater Valley Section	1,639
4. Goulds Section	2,441
5. Mount Pearl Section	892
6. Mundy Pond Section	1,786
7. Nagle's Hill Section	1,887
8. Quidi Vidi Section	655
9. Torbay Road Section	1,652
10. Waterford Valley Section	2,302

Section 5.—Population of Counties and Census Divisions

Population totals for counties and census divisions for census years 1901-51 are given in the 1952-53 Year Book, pp. 137-141. Further details, including populations of the subdivisions of counties, may be found in *Ninth Census of Canada 1951*, Vol. I.

Section 6.—Population of Incorporated Urban Centres

The growth of Canadian cities with populations of over 30,000 from 1941 to 1951, together with the years of their incorporation as cities, is shown in Table **6**. All incorporated cities, towns and villages having populations of 1,000 or over in 1951 are listed in Table **9**.

6.—Incorporated Cities with Populations of over 30,000 at the 1951 Census and Comparable Data for 1941

NOTE.—Incorporated cities in which a Board of Trade exists are indicated by an asterisk (*), and those in which there is a Chamber of Commerce by a dagger (†).

City and Province	Year of Incorporation as City	Population 1941	Population 1951	City and Province	Year of Incorporation as City	Population 1941	Population 1951
		No.	No.			No.	No.
*Brantford, Ont.	1877	31,948	36,727	*Regina, Sask.	1903	58,245	71,319
*Calgary, Alta.	1893	88,904	129,060	†St. Catharines, Ont.	1876	30,275	37,984
†Edmonton, Alta.	1904	93,817	159,631	*Saint John, N.B.	1785	51,741	50,779
†Fort William, Ont.	1907	30,585	34,947	*St. John's, N'f'ld	1888	44,603[1]	52,873
*Halifax, N.S.	1841	70,488	85,589	Sarnia, Ont.	1914	18,734	34,697
†Hamilton, Ont.	1846	166,337	208,321	*Saskatoon, Sask.	1906	43,027	53,268
†Hull, Que.	1875	32,947	43,483	†Sault Ste. Marie, Ont.	1912	25,794	32,452
†Kingston, Ont.	1846	30,126	33,459	†Sherbrooke, Que.	1875	35,965	50,543
*Kitchener, Ont.	1912	35,657	44,867	*Sudbury, Ont.	1930	32,203	42,410
†London, Ont.	1855	78,134	95,343	*Sydney, N.S.	1904	28,305	31,317
*†Montreal, Que.	1832	903,007	1,021,520	†Three Rivers, Que.	1857	42,007	46,074
†Oshawa, Ont.	1924	26,813	41,545	*Toronto, Ont.	1834	667,457	675,754
*Ottawa, Ont.	1854	154,951	202,045	*Vancouver, B.C.	1886	275,353	344,833
Outremont, Que.	1915	30,751	30,057	†Verdun, Que.	1912	67,349	77,391
†Peterborough, Ont.	1905	25,350	38,272	†Victoria, B.C.	1862	44,068	51,331
†Port Arthur, Ont.	1907	24,426	31,161	†Windsor, Ont.	1892	105,311	120,049
*Quebec, Que.	1832	150,757	164,016	*Winnipeg, Man.	1873	221,960	235,710

[1] Census taken by the Newfoundland Government in 1945; 1941 figure not available.

For census purposes, metropolitan areas have been established for groups of urban communities that are in close economic, geographic and social relationship. The total population of each of the census metropolitan areas in 1951, with the comparable figure from the 1941 Census covering the same area as in 1951, is shown in Table **7**. In this table the metropolitan area has been named after the largest city of each urban group.

7.—Populations of Census Metropolitan Areas, 1951, compared with Populations of Same Areas in 1941

Metropolitan Area	Population 1941	Population 1951	Metropolitan Area	Population 1941	Population 1951
	No.	No.		No.	No.
Calgary, Alta.	93,021	139,105	Saint John, N.B.	70,927	78,337
Edmonton, Alta.	97,842	173,075	St. John's, N'f'ld	..	67,749
Halifax, N.S.	98,636	133,931	Toronto, Ont.	909,928	1,117,470
Hamilton, Ont.	197,732	259,685	Vancouver, B.C.	377,447	530,728
London, Ont.	91,024	121,516	Victoria, B.C.	75,560	104,303
Montreal, Que.	1,145,282	1,395,400	Windsor, Ont.	123,973	157,672
Ottawa, Ont.	226,290	281,908	Winnipeg, Man.	299,937	354,069
Quebec, Que.	224,756	274,827			

The distribution of the population of incorporated urban centres in Canada by size groups is given in Table 8 for the census years 1931, 1941 and 1951.

8.—Populations of Incorporated Cities, Towns and Villages, by Size, Census Years 1931, 1941 and 1951

Group	1931[1]			1941[1]			1951		
	Places	Population	P.C. of Total Pop.	Places	Population	P.C. of Total Pop.	Places	Population	P.C. of Total Pop.
	No.	No.		No.	No.		No.	No.	
Over 500,000	2	1,449,784	13·97	2	1,570,464	13·65	2	1,697,274	12·11
Between—									
400,000 and 500,000	—	—	—	—	—	—	—	—	—
300,000 and 400,000	—	—	—	—	—	—	1	344,833	2·46
200,000 and 300,000	2	465,378	4·48	2	497,313	4·32	3	646,076	4·61
100,000 and 200,000	3	413,013	3·98	4	577,356	5·02	4	572,756	4·09
50,000 and 100,000	7	470,443	4·53	7	508,808	4·42	9	588,436	4·20
25,000 and 50.000	10	339,521	3·27	19	605,805	5·26	24	802,380	5·73
15,000 and 25,000	23	457,292	4·41	20	377,505	3·28	34	636,713	4·54
10,000 and 15,000	23	275,944	2·66	24	296,195	2·57	29	347,410	2·48
5,000 and 10,000	68	458,784	4·42	74	510,429	4·44	100	720,077	5·14
3,000 and 5,000	71	273,276	2·63	91	348,709	3·03	119	457,492	3·27
1,000 and 3,000	324	557,466	5·37	337	561,019	4·88	409	698,092	4·98
Under 1,000	1,072	411,157	3·96	1,060	398,813	3·47	1,049	429,683	3·07
Totals	**1,605**	**5,572,058**	**53·79**	**1,640**	**6,252,416**	**54·34**	**1,783**	**7,941,222**	**56·68**

[1] Newfoundland not included.

Of the 1,783 incorporated urban centres in Canada at the date of the latest Census, June 1, 1951, 734 had a population of 1,000 or over. These are listed alphabetically by province in Table 9, with their 1951 populations and comparative figures for 1941.

9.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941

Province and Incorporated Centre	1945[1]	1951	Province and Incorporated Centre	1941	1951
	No.	No.		No.	No.
Newfoundland—			**Nova Scotia—**		
Bay Roberts	..	1,222	Amherst	8,620	9,870
Carbonear	..	3,351	Antigonish	2,157	3,196
Channel-Port aux Basques	..	2,634	Berwick	962	1,045
Corner Brook East	..	3,445	Bridgetown	1,020	1,038
Corner Brook West	5,464	6,831	Bridgewater	3,445	4,010
Curling	..	3,559	Canso	1,418	1,313
Deer Lake	..	2.655	Clark's Harbour	887	1,020
Fogo	..	1,078	Dartmouth	10,847	15,037
Grand Bank	2,329	2,148	Digby	1,657	2,047
Harbour Grace	2,065	2,331	Dominion	3,279	3,143
Lewisporte	..	1,218	Glace Bay	25,147	25,586
St. Anthony	1,109	1,380	Halifax	70,488	85,589
St. John's	44,603	52,873	Hantsport	907	1,131
St. Lawrence	..	1,451	Inverness	2,975	2,360
Wabana	..	6,460	Kentville	3,928	4.240
Wesleyville	968	1,304	Liverpool	3,170	3,535
Windsor	2,772	3,674	Lockeport	1,084	1,225
			Louisburg	1.012	1,120
	1941	1951	Lunenburg	2.856	2,816
			Mahone Bay	1,025	1.019
Prince Edward Island—			Middleton	1.172	1,506
Charlottetown	14,821	15,887	Mulgrave	1,057	1,212
Montague	769	1,068	New Glasgow	9,210	9,933
Souris	1,114	1,183	New Waterford	9,302	10,423
Summerside	5,034	6,547	North Sydney	6,836	7,354

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[1] Census taken by the Newfoundland Government in 1945; 1941 figures not available.

9.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Nova Scotia—concluded		
Oxford	1,297	1,466
Parrsboro	1,971	1,906
Pictou	3,069	4,259
Port Hawkesbury	1,031	1,034
Shelburne	1,605	2,040
Springhill	7,170	7,138
Stellarton	5,351	5,575
Stewiacke	961	1,018
Sydney	28,305	31,317
Sydney Mines	8,198	8,410
Trenton	2,699	3,089
Truro	10,272	10,756
Westville	4,115	4,301
Windsor	3,436	3,439
Wolfville	1,944	2,313
Yarmouth	7,790	8,106
New Brunswick—		
Bathurst	3,554	4,453
Campbellton	6,748	7,754
Chatham	4,082	5,223
Dalhousie	4,508	4,939
Dieppe	[1]	3,402
Edmundston	7,096	10,753
Fredericton	10,062	16,018
Grand Falls	1,806	2,365
Hartland	847	1,000
Marysville	1,651	2,152
Milltown	1,876	2,267
Moncton	22,763	27,334
Newcastle	3,781	4,248
St. Andrews	1,167	1,458
St. George	1,169	1,263
St. Leonard	1,095	1,419
St. Stephen	3,306	3,769
Sackville	2,489	2.873
Saint John	51,741	50,779
Shediac	2,147	2,010
Shippegan	[1]	1,181
Sunny Brae	1,368	2,048
Sussex	3,027	3,224
Woodstock	3,593	3,996
Quebec—		
Acton Vale	2,366	3,367
Amos	2,862	4,265
Amqui[2]	1,593	2,599
Arthabaska	1,883	2,321
Arvida	4,581	11,078[3]
Asbestos	5,711	8,190
Aylmer	3,115	4,375
Bagotville	3,248	4,136
Baie Comeau	1,548	3,972
Baie de Shawinigan	1,255	1,223
Baie St. Paul	3,500	3,716
Beaconsfield	706	1,888
Beauceville	899	1,149
Beauceville E.	1,251	1,573
Beauharnois	3,550	5,694
Beauport	3,725	5,390
Beauport E.	587	1,096
Bedford	1,697	2,073
Beebe Plain	1,024	1,352
Belleterre	[1]	1,011
Belœil	2,008	2,992
Bernierville	1,638	1,959
Berthierville[4]	2,634	3,325
Bic	1,117	1,086
Black Lake	2,276	2,800
Boucherville	1,047	1,583
Quebec—continued		
Bourlamaque	1,545	2,460
Bromptonville	1,672	2,025
Brownsburg	3,105	3,238
Buckingham	4,516	6,129
Cabano	2,031	2,594
Cadillac	989	1,514
Cap Chat	1,329	1,642
Cap de la Madeleine	11,961	18,667
Causapscal	1,545	2,609
Chambly Bassin	1,423	2,160
Chambly Canton	1,185	1,636
Chambord	1,029	1,070
Chandler	1,858	2,326
Charlemagne	1,150	1,856
Charlesbourg	2,789	5,734
Charny	2,831	3,300
Châteauguay	1,425	2,240
Chicoutimi	16,040	23,111
Clermont	[1]	2,027
Coaticook	4,414	6,341
Contrecœur	1,043	1,435
Cookshire	877	1,209
Côte-St-Luc	776	1,083
Courville	2,011	3,138
Cowansville	3,486	4,431
Danville	1,332	2,092
DeLéry	816	1,194
Deschaillons-sur-St. Laurent	1,078	1,185
Deschênes	284	1,169
Disraëli	1,338	2,145
Dolbeau	2,847	4,307
Donnacona	3,064	3,663
Dorion	1,292	2,413
Dorval	2,048	5,293
Drummondville	10,555	14,341
Drummondville W.	[1]	1,275
Duparquet	1,384	1,485
East Angus	3,501	3,714
Farnham	4,055	4,926
Ferme-Neuve	811	1,660
Fort Coulonge	1,072	1,431
Gaspe	924	1,692
Gatineau	2,822	5,771
Giffard	4,909	8,097
Granby	14,197	21,989
Grand'Mère	8,608	11,089
Greenfield Park	1,819	3,379
Grenville	737	1,069
Hampstead	1,974	3,260
Hébertville Station	950	1,038
Hudson	731	1,283
Hull	32,947	43,483
Huntingdon	1,952	2,806
Iberville	3,454	5,185
Jacques-Cartier	[1]	22,450
Joliette	12,749	16,064
Jonquière	13,769	21,618
Kénogami	6,579	9,895
Knowlton	972	1,094
Labelle	709	1,003
L'Abord-à-Plouffe	1,773	4,604
Lac-au-Saumon	1,703	1,622
Lachine	20,051	27,773
Lachute	5.310	6,179
Lacolle	874	1,055
Lac St. Louis	819	1,300
La Guadeloupe[5]	627	1,321
La Malbaie	2,324	2,466
La Pérade	1,014	1,111
Laprairie	2,936	4.058

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[1] Not incorporated in 1941. [2] St. Benoît-Joseph-Labre in 1941. [3] Racine annexed to town of Arvida. [4] Berthier in 1941. [5] St. Evariste Station in 1941.

9.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Quebec—continued		
La Providence	1,924	2,693
Lasalle	4,651	11,633
La Sarre	2,167	2,744
L'Assomption	1,829	2,688
La Tuque	7,919	9.538
Laurentides	1,342	1,465
Lauzon	7.877	9.643
Laval-des-Rapides	3,242	4,998
Laval W	542	1,935
Le Moyne	[1]	4,078
Lennoxville	2,150	2,895
L'Epiphanie	1,941	2,462
Lévis	11,991	13,162
Longueuil	7,087	11.103
Loretteville	2,564	4,382
Louiseville	3,542	4,088
Luceville	701	1,059
Macamic	645	1,123
Mackayville	[1]	6,494
Magog	9.034	12,423
Malartic	2,895	5,983
Maniwaki	2,320	3,835
Marieville	2,394	3,117
Masson	1,226	1,475
Matane	4,633	6,345
McMasterville	1,097	1,509
Mégantic	4,560	6,164
Mistassini	1,294	2,298
Montebello	1,266	1,397
Mont Joli	3,533	4,938
Mont Laurier	2,661	4,701
Montmagny	4,585	5,844
Montmorency	5,393	5,817
Montreal	903,007	1,021,520
Montreal E	2,355	4,513
Montreal N	6,152	14,081
Montreal S	1,441	4,214
Montreal W	3,474	3,721
Mount Royal	4,888	11,352
Napierville	990	1,356
Naudville	[1]	1,430
Nicolet	3,751	4,084
Noranda	4,576	9,672
Normandin	1,029	1,678
Notre-Dame-d'Hébertville	1,025	1,285
Notre-Dame-de-Lorette	[1]	2,516
Notre-Dame-de-Portneuf	1,015	1,144
Notre-Dame-du-Lac	[1]	1,364
Ormstown	887	1,233
Outremont	30,751	30,057
Papineauville	1,023	1,024
Parent	[1]	1,255
Pierreville	1,302	1,448
Plessisville	3,522	5,094
Pointe-à-Gatineau	2,230	3,874
Pointe-au-Pic	1,083	1,105
Pointe-aux-Trembles	4,314	8,241
Pointe Claire	4,536	8,753
Pont Rouge	1,865	2,413
Pont Viau	1,342	5,129
Port Alfred	3,243	3,937
Price	2,321	2,810
Princeville	1,145	1,967
Quebec	150,757	164,016
Quebec W	3,619	7,295
Rawdon	1,236	1,912
Richelieu	773	1,129
Richmond	3,082	3,471
Rigaud	1,222	1,579
Rimouski	7,009	11,565
Rivière-du-Loup	8,713	9,425

Province and Incorporated Centre	1941	1951
	No.	No.
Quebec—continued		
Rivière-du-Moulin	1,561	2,685
Roberval	3,220	4,897
Rock Island	1,395	1,646
Rouyn	8,808	14,633
Ste. Agathe-des-Monts	3,308	5,169
St. Alexis-de-la-Grande-Baie	2,230	2,974
St. Ambroise	458	1,032
Ste. Anne-de-Beaupré	1,783	1,827
Ste. Anne-de-Bellevue	3,006	3,342
Ste. Anne-de-Chicoutimi	1,540	3,966
St. Basile South	[1]	1,347
St. Casimir	1,307	1,334
St. Césaire	1,209	1,658
St. Cœur-de-Marie	661	1,061
Ste. Croix	841	1,080
St. Cyrille	723	1,189
St. Emilien	1,018	1,651
St. Eustache	1,564	2,615
St. Eustache-sur-le-Lac	1,472	3,211
St. Félicien	1,603	2,656
St. Felix-de-Valois	1,130	1,201
Ste. Foy	[2]	5,236
St. Gabriel-de-Brandon	1,632	2,661
Ste. Geneviève-de-Pierrefonds	489	1,322
St. Georges (Champlain Co.)	753	1,143
St. Georges (Beauce Co.)[3]	1,945	2,657
St. Georges W.(Beauce Co.)	[1]	2,691
St. Hilaire	686	1,436
St. Hyacinthe	17,798	20,236
St. Jacques	1,634	1,729
St. Jean	13,646	19,305
St. Jean-de-Boischatel	882	1,297
St. Jérôme (Lac St. Jean Co.)	1,469	1,480
St. Jérôme (Terrebonne Co.)	11,329	17,685
St. Joseph (Beauce Co.)	1,892	2,417
St. Joseph (Drummond Co.)	5,556	6,576
St. Joseph (St. Hyacinthe Co.)	1,021	2,122
St. Joseph-d'Alma	6,449	7,975
St. Joseph-de-la-Rivière-Bleue	1,082	1,334
St. Joseph-de-Sorel[4]	2,207	3,349
St. Jovite	1,059	1,453
St. Lambert	6,417	8,615
St. Laurent	6,242	20,426
St. Marc-des-Carrières	2,118	2,351
Ste. Marie	1,736	2,431
St. Michel (Montreal Island)	2,956	10,539
St. Pacôme	1,254	1,197
St. Pascal	1,265	1,736
St. Pie	1,009	1,182
St. Pierre (Montreal Island)	4,061	4,976
St. Raymond	2,157	3,139
St. Remi	1,431	1,845
Ste. Rosalie	[1]	1,038
Ste. Rose	2,292	3,660
St. Sauveur-des-Monts	595	1,066
St. Siméon	858	1,103
Ste. Thècle	904	1,468
Ste. Thérèse	4,659	7,038
St. Tite	2,385	2,856
Sayabec	2,115	2,220
Scotstown	1,273	1,350
Senneterre	[1]	1,686
Sept-Iles	[1]	1,866
Shawinigan Falls	20,325	26,903
Shawinigan-South	2,282	6,637
Shawville	892	1,159
Sherbrooke	35,965	50,543

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[1] Not incorporated in 1941. [2] Ste. Foy Rural Municipality in 1941. [3] St. Georges E. in 1941. [4] St. Joseph in 1941.

9.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Quebec—concluded		
Sillery	[1]	10,376
Sorel	12,251	14,961
Sutton	1,118	1,389
Tadoussac	766	1,064
Témiscaming	2,168	2,787
Templeton	949	1,717
Terrebonne	2,209	3,200
Thetford Mines	12,716	15,095
Three Rivers	42,007	46,074
Thurso	1,295	1,973
Trois Pistoles	2,176	3,537
Val-d'Or	4,385	8,685
Vallée Jonction[2]	1,175	1,279
Valleyfield (Salaberry-de-)	17,052	22,414
Varennes	781	1,104
Verchères	906	1,201
Verdun	67,349	77,391
Victoriaville	8,516	13,124
Ville-Marie	1,001	1,316
Warwick	1,504	2,094
Waterloo	3,173	4,054
Waterville	844	1,205
Weedon Centre	599	1,066
Westmount	26,047	25,222
Windsor	3,368	4,714
Ontario—		
Acton	2,063	2,880
Alexandria	2,175	2,204
Alliston	1,733	1,987
Almonte	2,543	2,672
Amherstburg	2,853	3,638
Arnprior	3,895	4,381
Arthur	937	1,088
Aurora	2,726	3,358
Aylmer	2,478	3,483
Bancroft	1,094	1,334
Barrie	9,725	12,514
Barry's Bay	1,198	1,218
Beamsville	1,309	1,712
Beaverton	934	1,048
Belle River	999	1,431
Belleville	15,710	19,519
Blenheim	1,952	2,459
Blind River	2,619	2,512
Bobcaygeon	1,002	1,207
Bowmanville	4,113	5,430
Bracebridge	2,341	2,684
Bradford	1,033	1,483
Brampton	6,020	8,389
Brantford	31,948	36,727
Bridgeport	[3]	1,137
Brighton	1,651	1,967
Brockville	11,342	12,301
Burlington	3,815	6,017
Burlington Beach[4]	..	2,827
Caledonia	1,401	1,681
Campbellford	3,018	3,235
Capreol	1,641	2,002
Cardinal	1,645	1,782
Carleton Place	4,305	4,725
Casselman	1,021	1,158
Chatham	17,369	21,218
Chelmsford	905	1,210
Chesley	1,701	1,672
Chesterville	1,067	1,094
Chippewa	1,385	1,762
Clinton	1,896	2,547
Cobalt	2,376	2,230
Cobourg	5,973	7,470
Ontario—continued		
Cochrane	2,844	3,401
Colborne	994	1,108
Collingwood	6,270	7,413
Coniston	2,245	2,292
Copper Cliff	3,732	3,974
Cornwall	14,117	16,899
Crystal Beach	618	1,204
Delhi	2,062	2,517
Deseronto	1,261	1,522
Dresden	1,662	2,052
Dryden	1,641	2,627
Dundas	5,276	6,846
Dunnville	4,028	4,478
Durham	1,700	1,839
Eastview	7,966	13,799
Eganville	1,088	1,326
Elmira	2,012	2,589
Elora	1,247	1,348
Englehart	1,262	1,585
Essex	1,935	2,741
Exeter	1,589	2,547
Fenelon Falls	1,158	1,304
Fergus	2,832	3,387
Fonthill	1,000	1,412
Forest	1,570	1,790
Forest Hill	11,757	15,305
Fort Erie	6,595	7,572
Fort Frances	5,897	8,038
Fort William	30,585	34,947
Frankford	1,144	1,393
Galt	15,346	19,207
Gananoque	4,044	4,572
Georgetown	2,562	3,452
Geraldton	2,979	3,227
Goderich	4,557	4,934
Gravenhurst	2,122	3,005
Grimsby	2,331	2,773
Guelph	23,273	27,386
Hagersville	1,455	1,746
Haileybury	2,268	2,346
Hamilton	166,337	208,321
Hanover	3,290	3,533
Harriston	1,305	1,494
Harrow	1,166	1,519
Havelock	1,113	1,132
Hawkesbury	6,263	7,194
Hearst	995	1,723
Hespeler	3,058	3,862
Humberstone	2,963	3,895
Huntsville	2,800	3,286
Ingersoll	5,782	6,524
Iroquois	956	1,086
Iroquois Falls	1,302	1,342
Kapuskasing	3,431	4,687
Keewatin	1,481	1,634
Kemptville	1,232	1,488
Kenora	7,745	8,695
Kincardine	2,507	2,672
Kingston	30,126	33,459
Kingsville	2,317	2,631
Kitchener	35,657	44,867
Lakefield	1,349	1,710
La Salle	951	1,854
Leamington	5,858	6,950
Leaside	6,183	16,233
Levack	895	1,833
Lindsay	8,403	9,603
Listowel	3,013	3,469
Little Current	1,088	1,397
London	78,134	95,343

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[1] St. Colomb-de-Sillery Rural Municipality in 1941. [2] L'Enfant Jesus in 1941. [3] Not incorporated in 1941. [4] Park Commission.

9.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—continued

Province and Incorporated Centre	1941	1951
	No.	No.
Ontario—continued		
Long Branch	5,172	8,727
Madoc	1,188	1,240
Markdale	870	1,007
Markham	1,204	1,606
Marmora	1,106	1,117
Mattawa	1,971	3,097
Meaford	2,662	3,178
Merritton	2,993	4,714
Midland	6,800	7,206
Milton	1,964	2,451
Milverton	1,015	1,055
Mimico	8,070	11,342
Mitchell	1,777	1,979
Morrisburg	1,575	1,858
Mount Forest	1,892	2,291
Napanee	3,405	3,897
New Hamburg	1,402	1,738
New Liskeard	3,019	4,215
Newmarket	4,026	5,356
New Toronto	9,504	11,194
Niagara	1,541	2,108
Niagara Falls	20,589	22,874
North Bay	15,599	17,944
Norwich	1,268	1,439
Oakville	4,115	6,910
Orangeville	2,718	3,249
Orillia	9,798	12,110
Oshawa	26,813	41,545
Ottawa	154,951	202,045
Owen Sound	14,002	16,423
Palmerston	1,418	1,573
Paris	4,637	5,249
Parry Sound	5,765	5,183
Pembroke	11,159	12,704
Penetanguishene	4,521	4,949
Perth	4,458	5,034
Peterborough	25,350	38,272
Petrolia	2,801	3,105
Picton	3,901	4,287
Point Edward	1,363	1,838
Port Arthur	24,426	31,161
Port Colborne	6,993	8,275
Port Credit	2,160	3,643
Port Dalhousie	1,723	2,616
Port Dover	1,968	2,440
Port Elgin	1,395	1,558
Port Hope	5,055	6,548
Port Perry	1,245	1,721
Portsmouth	3,135	3,411
Port Stanley	1,177	1,491
Prescott	3,223	3,518
Preston	6,704	7,619
Rainy River	1,205	1,348
Renfrew	5,511	7,360
Richmond Hill	1,345	2,164
Ridgetown	1,944	2,365
Riverside	4,878	9,214
Rockcliffe Park	1,480	1,595
Rockland	2,040	2,348
St. Catharines	30,275	37,984
St. Mary's	3,635	3,995
St. Thomas	17,132	18,173
Sarnia	18,734	34,697
Sault Ste. Marie	25,794	32,452
Seaforth	1,668	2,118
Shelburne	1,005	1,184
Simcoe	6,037	7,269
Sioux Lookout	1,756	2,364
Smith's Falls	7,159	8,441
Smooth Rock Falls	953	1,102
Southampton	1,600	1,700
Stayner	1,085	1,280
Ontario—concluded		
Stirling	990	1,100
Stoney Creek	1,007	1,922
Stouffville	1,253	1,695
Stratford	17,038	18,785
Strathroy	3,016	3,708
Streetsville	709	1,139
Sturgeon Falls	4,576	4,962
Sudbury	32,203	42,410
Sutton	1,051	1,168
Swansea	6,988	8,072
Tavistock	1,066	1,094
Tecumseh	2,412	3,543
Thessalon	1,316	1,595
Thorold	5,305	6,397
Tilbury	2,155	2,682
Tillsonburg	4,002	5,330
Timmins	28,790	27,743
Toronto	667,457	675,754
Trenton	8,323	10,085
Tweed	1,343	1,562
Uxbridge	1,406	1,785
Vankleek Hill	1,435	1,480
Walkerton	2,679	3,264
Wallaceburg	4,986	7,688
Waterdown	910	1,347
Waterford	1,342	1,745
Waterloo	9,025	11,991
Watford	1,076	1,201
Welland	12,500	15,382
West Lorne	728	1,031
Weston	5,740	8,677
Wheatley	785	1,021
Whitby	5,904	7,267
Wiarton	1,749	1,955
Winchester	1,049	1,201
Windsor	105,311	120,049
Wingham	2,030	2,642
Woodbridge	1,044	1,699
Woodstock	12,461	15,544
Manitoba—		
Altona	[1]	1,438
Beauséjour	1,161	1,376
Boissevain	817	1,015
Brandon	17,383	20,598
Brooklands	2,240	2,915
Carman	1,455	1,867
Dauphin	4,662	6,007
Flin Flon	[1]	9,899
Gimli	853	1,324
Killarney	1,051	1,262
Minnedosa	1,636	2,085
Morden	1,427	1,862
Morris	953	1,193
Neepawa	2,292	2,895
Portage la Prairie	7,187	8,511
Powerview	[1]	1,075
Rivers	802	1,209
Roblin	765	1,055
Russell	783	1,100
St. Boniface	18,157	26,342
Selkirk	4,915	6,218
Souris	1,346	1,584
Steinbach	[1]	2,155
Stonewall	1,020	1,040
Swan River	1,129	2,290
The Pas	3,181	3,376
Transcona	5,495	6,752
Tuxedo	735	1,627
Virden	1,619	1,746
Winkler	957	1,331
Winnipeg	221,960	235,710

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[1] Not incorporated in 1941.

9.—Incorporated Cities, Towns and Villages having Populations of 1,000 or over, by Province, Census 1951 compared with 1941—concluded

Province and Incorporated Centre	1941	1951
	No.	No.
Saskatchewan—		
Assiniboia	1,349	1,938
Battleford	1,317	1,319
Biggar	1,930	2,214
Canora	1,200	1,568
Estevan	2,774	3,935
Eston	726	1,301
Gravelbourg	1,130	1,197
Grenfell	857	1,007
Hudson Bay	547	1,115
Humboldt	1,767	2,435
Indian Head	1,349	1,569
Kamsack	1,792	2,327
Kindersley	990	1,755
Lloydminster[1]	1,624	3,938
Maple Creek	1,085	1,638
Meadow Lake	971	1,956
Melfort	2,005	2,919
Melville	4,011	4,458
Moose Jaw	20,753	24,355
Moosomin	1,096	1,235
Nipawin	1,344	3,050
North Battleford	4,745	7,473
Prince Albert	12,508	17,149
Regina	58,245	71,319
Rosetown	1,470	1,865
Rosthern	1,149	1,183
Saskatoon	43,027	53,268
Shaunavon	1,603	1,625
Sutherland	888	1,329
Swift Current	5,594	7,458
Tisdale	1,237	2,141
Unity	682	1,248
Wadena	679	1,081
Watrous	1,138	1,228
Weyburn	6,179	7,148
Wilkie	1,252	1,580
Wynyard	1,080	1,326
Yorkton	5,577	7,074
Alberta—		
Athabasca	578	1,068
Barrhead	399	1,243
Beverly	981	2,159
Black Diamond	890	1,154
Blairmore	1,731	1,933
Bonnyville	603	1,139
Bowness	[2]	2,922
Brooks	888	1,648
Calgary	88,904	129,060
Camrose	2,598	4,131
Cardston	1,864	2,487
Claresholm	1,265	1,608
Coleman	1,870	1,961
Didsbury	892	1,180
Drumheller	2,748	2,601
Edmonton	93,817	159,631
Edson	1,499	1,956
Forest Lawn	899	1,079
Fort Saskatchewan	903	1,076
Grande Prairie	1,724	2,664
Hanna	1,622	2,027
High Prairie	[2]	1,141
High River	1,430	1,888
Innisfail	1,223	1,417
Jasper Place	[2]	9,139
Lacombe	1,603	2,277
Leduc	871	1,842
Lethbridge	14,612	22,947
Macleod	1,912	1,860
Magrath	1,207	1,320
Alberta—concluded		
McLennan	[2]	1,074
Medicine Hat	10,571	16,364
Olds	1,337	1,617
Peace River	873	1,672
Pincher Creek	994	1,456
Ponoka	1,306	2,574
Raymond	2,089	2,279
Redcliff	1,111	1,538
Red Deer	2,924	7,575
Redwater	[2]	1,306
Rocky Mountain House	800	1,147
St. Albert	697	1,129
St. Paul	1,018	1,407
Stettler	1,295	2,442
Taber	1,331	3,042
Three Hills	706	1,026
Vegreville	1,696	2,223
Vermilion	1,408	1,982
Vulcan	732	1,040
Wainwright	980	1,996
Westlock	590	1,111
Wetaskiwin	2,318	3,824
British Columbia—		
Alberni	1,807	3,323
Armstrong	977	1,126
Campbell River	[2]	1,986
Castlegar	[2]	1,329
Chilliwack	3,675	5,663
Courtenay	1,737	2,553
Cranberry Lake	[2]	1,350
Cranbrook	2,568	3,621
Creston	1,153	1,626
Dawson Creek	518	3,589
Duncan	2,189	2,784
Fernie	2,545	2,551
Grand Forks	1,259	1,646
Hope	515	1,668
Kamloops	5,959	8,099
Kelowna	5,118	8,517
Kimberley	[2]	5,933
Ladysmith	1,706	2,094
Lake Cowichan	[2]	1,628
Merritt	940	1,251
Mission City	1,957	2,668
Nanaimo	6,635	7,196
Nelson	5,912	6,772
New Westminster	21,967	28,639
North Kamloops	[2]	1,979
North Vancouver	8,914	15,687
Oliver	[2]	1,000
Penticton	[3]	10,548
Port Alberni	4,584	7,845
Port Coquitlam	1,539	3,232
Port Moody	1,512	2,246
Prince George	2,027	4,703
Prince Rupert	6,714	8,546
Quesnel	653	1,587
Revelstoke	2,106	2,917
Rossland	3,657	4,604
Salmon Arm	836	1,201
Smithers	759	1,204
Trail	9,392	11,430
Vancouver	275,353	344,833
Vernon	5,209	7,822
Victoria	44,068	51,331
Westview	[2]	3,507
Yukon Territory—		
Whitehorse	754	2,594

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[1] Located partly in Alberta. [2] Not incorporated in 1941. [3] Penticton District Municipality in 1941.

Section 7.—Sex and Age Distribution

Sex.—The sex distribution of the Canadian people has been characterized since early colonial times by a preponderance of males, although this condition has been greatly modified in more recent years. In 1666, during the early years of settlement by French immigrants, 63·3 p.c. of the population were males. In 1784, when British immigration to Canada was commencing, there were 54,064 males and 50,759 females and by the middle of the nineteenth century there were 449,967 males to 440,294 females in Lower Canada and 499,067 males to 452,937 females in the more newly settled Upper Canada. Since Confederation, the newer sections of Canada—the west and the northwest—have shown the greatest excess of males.

From 1871 to 1941, for Canada as a whole, the proportion of males never dropped below 51 p.c. of the total population, whereas for Western Canada it varied between 53 p.c. and 59 p.c. By 1951, however, the proportion of males to the total population had dropped to 50·6 p.c. for Canada as a whole.

10.—Sex Distribution of the Population, by Province, Decennial Census Years 1921-51

Note.—Figures for the Censuses of 1871, 1881, 1891, 1901 and 1911 are given in the 1948-49 Year Book, p. 150.

Province or Territory	1921		1931		1941		1951	
	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland....	...	...	...	...	...	...	185,143	176,273
P.E. Island.......	44,887	43,728	45,392	42,646	49,228	45,819	50,218	48,211
Nova Scotia.......	266,472	257,365	263,104	249,742	296,044	281,918	324,955	317,629
New Brunswick...	197,351	190,525	208,620	199,599	234,097	223,304	259,211	256,486
Quebec...........	1,179,651	1,180,859	1,447,326	1,427,336	1,672,982	1,658,900	2,022,127	2,033,554
Ontario...........	1,481,890	1,451,772	1,748,844	1,682,839	1,921,201	1,866,454	2,314,170	2,283,372
Manitoba.........	320,567	289,551	368,065	332,074	378,079	351,665	394,818	381,723
Saskatchewan.....	413,700	343,810	499,935	421,850	477,563	418,429	434,568	397,160
Alberta...........	324,208	264,246	400,199	331,406	426,458	369,711	492,192	447,309
British Columbia..	293,409	231,173	385,219	309,044	435,031	382,830	596,961	568,249
Yukon............	2,819	1,338	2,825	1,405	3,153	1,761	5,457	3,639
N.W.T............	4,204	3,939	5,012	4,304	6,700	5,328	9,053	6,951
Canada.........	**4,529,643[1]**	**4,258,306**	**5,374,541**	**5,002,245**	**5,900,536**	**5,606,119**	**7,088,873**	**6,920,556**

[1] Includes 485 members of the Royal Canadian Navy recorded separately.

Age.—The age distribution of a population is fundamental to most, if not all, other analyses, for the age factor influences employment, marriage, birth rates and death rates, education, immigration, criminology and a multitude of events and activities that are of great importance in the national life.

Immigration has a strong influence on age distribution: it does not directly affect the very young sections of the population except to a small degree, but it immediately affects the age groups between the 'teens' and the 'twenties' and its effects are carried to the older groups as time goes by. Thus, the influence of the very heavy immigration of the early years of the century (1900-11) is indicated by the fact that, in 1901, 175·9 persons per 1,000 of the total population were in the age group 20-29 years and 131·3 persons per 1,000 in the group 30-39 years; a decade later, 190·7 per 1,000 were in the former group and 142·9 in the latter. Since immigration slowed down very decidedly after the outbreak of war in 1914, the influence of these earlier accretions to the population has crept through the upper age groups year by year until it has now reached those of the population in their 'fifties'.

Between 1931 and 1941 a more pronounced general ageing of the population is shown, a result of almost non-existent immigration and a lower birth rate—factors that were emphasized during the depression years. In 1921, the number per 1,000 of total population between 40 and 59 years of age was 183; it was 201 in 1931 and 209 in 1941. Greater proportional increases, however, are shown by the group 60 years of age or over; this group represented 75 per 1,000 of the total population in 1921, 84 in 1931 and no less than 102 per 1,000 in 1941.

In 1951, there were 203·2 persons per 1,000 of total population between 40 and 59 years of age and 113·7 in the group 60 years of age or over. However, there were 222·7 persons per 1,000 of total population in the under 10 years of age group in 1951 as compared with 182·3 in 1941, 212·7 in 1931 and 240·0 in 1921.

Table **11** shows the population of Canada classified by five-year age groups and sex for the census years 1931, 1941 and 1951. The provincial distribution from the 1951 Census, by specified age groups, is shown in Table **12**.

11.—Male and Female Populations by Age Group, Census Years 1931, 1941 and 1951

Age Group	1931[1]		1941		1951	
	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.
0– 4 years	543,299	531,293	533,903	517,951	879,063	843,046
5– 9 “	572,648	560,296	529 092	516,728	713,873	683,952
10–14 “	543,067	531,173	556,304	544,573	575,122	555,661
15–19 “	525,536	514,474	565,212	554,823	532,180	525,792
20–24 “	463,978	447,584	517,956	514,470	537,535	551,106
25–29 “	410,220	376,407	488,340	478,650	552,812	578,403
30–34 “	368,346	340,792	431,591	412,255	512,557	530,177
35–39 “	359,318	329,474	396,453	363,101	503,571	495,562
40–44 “	347,989	298,416	348,616	327,929	445,800	422,767
45–49 “	321,749	263,770	332,503	302,643	387,708	356,971
50–54 “	267,526	221,408	315,866	275,838	340,461	322,195
55–59 “	199,296	167,910	275,234	231,658	292,564	278,126
60–64 “	157,019	137,722	218,557	188,594	264,324	241,828
65–69 “	120,770	110,467	162,517	145,207	228,076	205,421
70–74 “	88,630	83,040	111,152	105,949	160,398	154,674
75–79 “	50,046	48,624	67,200	68,495	94,130	94,261
80–84 “	23,891	25,300	34,083	37,431	45,963	50,828
85–89 “	8,670	10,469	12,621	15,015	17,539	22,060
90 years or over	2,543	3,626	3,336	4,809	5,197	7,726
Totals	**5,374,541**	**5,002,245**	**5,900,536**	**5,606,119**	**7,088,873**	**6,920,556**

[1] Persons whose ages were not stated have been pro-rated over the various age groups.

12.—Age Distribution of the Population, by Province, Census 1951

Province or Territory	0-4	5-9	10-14	15-19	20-24	25-34	35-44	45-54	55-64	65-69	70+	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland	58,831	46,433	36,126	30,403	26,718	48,871	41,417	27,883	21,244	9,071	14,419	361,416
Prince Edward Island	13,213	10,358	9,294	8,296	6,557	12,739	11,641	8,985	7.639	3,268	6,439	98,429
Nova Scotia	82.540	68,816	58,131	51,533	46,275	93,276	82,912	57,822	46,354	19,440	35,485	642,584
New Brunswick	74,869	59,504	49,541	42,850	36,559	72,167	61,576	44,147	35,451	14,286	24,747	515,697
Quebec	541,524	463,444	361,140	337,501	340,902	629,310	518,290	375,657	255,816	93,161	138,936	4,055,681
Ontario	514,722	399,292	325,300	315,685	352,360	738,282	643,139	515,607	392,792	155,097	245,266	4,597,542
Manitoba	89.977	72,594	60,143	57,188	58,752	120,780	105,984	78,852	66,803	27,347	38,121	776,541
Saskatchewan	99,855	81,782	73,615	68,482	62,613	122,602	107,217	79,188	69,161	29,103	38,110	831,728
Alberta	116,846	93.063	76,897	73,941	75.527	148,666	123,480	92,480	71,658	29,439	37,504	939,501
British Columbia	125,886	99,892	78,609	70,230	79,824	182,370	168,819	124,693	108,750	52,927	73,210	1,165,210
Yukon Territory	1,319	809	526	435	934	2,115	1,313	750	428	186	281	9,096
Northwest Territories	2,527	1,838	1,461	1,428	1,620	2,771	1,912	1,271	746	172	258	16,004
Canada	**1,722,109**	**1,397,825**	**1,130,783**	**1,057,972**	**1,088.641**	**2,173,949**	**1,867,700**	**1,407,335**	**1,076,842**	**433,497**	**652,776**	**14,009,429**

Section 8.—Marital Status

Next to the sex and age distribution of a population, that of marital status is probably most fundamental from a vital, economic and social viewpoint. The number of married females between 15 and 45 years of age is a most significant factor in the fertility of a population; if the proportion of females in this group is small, the expected proportion of births will also be small. In 1951, 64·0 p.c. of all married females were in the age group 15-44 as compared with 61·2 p.c. in 1941 and 63·5 p.c. in 1931. This indicates a resumption of conditions favourable to the birth rate that prevailed from 1871 to 1921 but was arrested temporarily during the period of world-wide depression.

Although Canada has more single than married citizens, information from the 1951 Census shows that the nation's married population grew more than twice as fast as the single population in the decade between 1941 and 1951. With a total population increase of nearly 22 p.c., the number of single persons in Canada increased by 13·5 p.c., married by 32·2 p.c., widowed by 22·5 p.c. and divorced by 128·0 p.c. The entry of Newfoundland into Confederation accounted for 3·3 p.c. of the increase in single persons, 2·9 p.c. in married and widowed persons combined and 0·5 p.c. in divorced persons. Other striking statistics of marital status are the excess of married males over married females (largely owing to a preponderance of male immigrants whose wives had yet to join them), the great preponderance of widows compared with widowers and the large and increasing number of divorced persons.

13.—Marital Status of the Population, by Age Group and Sex, Census 1951

Age Group and Sex		Single	Married	Widowed	Divorced	Total
		No.	No.	No.	No.	No.
Under 15 years	M.	2,168,058	—	—	—	2,168,058
	F.	2,082,659	—	—	—	2,082,659
	T.	4,250,717	—	—	—	4,250,717
15 - 19 "	M.	526,909	5,255	15	1	532,180
	F.	484,056	41,633	83	20	525,792
	T.	1,010,965	46,888	98	21	1,057,972
20 - 24 "	M.	400,136	137,054	197	148	537,535
	F.	267.409	282,290	823	584	551,106
	T.	667,545	419,344	1,020	732	1,088,641
25 - 34 "	M.	294,318	766,504	2,409	2,138	1,065,369
	F.	192,921	901,073	9,496	5.090	1,108,580
	T.	487,239	1,667,577	11,905	7,228	2,173,949
35 - 44 "	M.	134,409	803,711	7,431	3,820	949,371
	F.	113,554	771,939	26,086	6,750	918,329
	T.	247,963	1,575,650	33,517	10,570	1,867,700
45 - 54 "	M.	93,992	613,008	17,637	3,532	728,169
	F.	76,738	539,854	58,437	4,137	679,166
	T.	170,730	1,152,862	76,074	7,669	1,407,335
55 - 64 "	M.	64,748	453,977	36,041	2,122	556,888
	F.	52,010	360.651	105,626	1,667	519,954
	T.	116,758	814,628	141,667	3,789	1,076,842
65 - 69 "	M.	27,706	170,043	29,641	686	228,076
	F.	19,717	115,574	69,783	347	205,421
	T.	47,423	285.617	99,424	1,033	433,497
70 years or over	M.	37,133	192,202	93,224	668	323,227
	F.	36,032	106,810	186,419	288	329,549
	T.	73,165	299,012	279,643	956	652,776
All Ages	**M.**	**3,747,409**	**3,141,754**	**186,595**	**13,115**	**7,088,873**
	F.	**3,325,096**	**3,119,824**	**456,753**	**18,883**	**6,920,556**
	T.	**7,072,505**	**6,261,578**	**643,348**	**31,998**	**14,009,429**

Section 9.—Origins

A population composed of diverse racial stocks gives rise to political, economic and social problems quite different in nature from those of one with a small admixture of foreign elements, although, to the extent that certain racial stocks are more readily assimilated than others, the problems are mitigated. It is equally true that the different educational, moral, economic, religious and political backgrounds of a people of mixed origins lend variety and diversity to the national life.

The two basic stocks of the Canadian people are the French and the English: historically the French is much the older and, excepting at the time of the 1921 Census, has always exceeded in numbers any one of the basic British stocks.

For purposes of the census, a person's origin or cultural group is traced through his father. For example, if a person's father is German and his mother Norwegian, the origin is entered as "German". Wherever possible, the origin of a person is established by asking the language spoken by the person or by his paternal ancestor when he first came to Canada.

14.—Origins of the Population, Census Years 1931, 1941 and 1951

NOTE.—Figures for the Decennial Censuses 1871-1921 are given in the 1948–49 Year Book, p. 154.

Origin	1931	1941	1951
	No.	No.	No.
British	**5,381,071**	**5,715,904**	**6,709,685**
English	2,741,419	2,968,402	3,630,344
Irish	1,230,808	1,267,702	1,439,635
Scottish	1,346,350	1,403,974	1,547,470
Other	62,494	75,826	92,236
Other European	**4,753,242**	**5.526,964**	**6,872,889**
French	2,927,990	3,483,038	4,319,167
Austrian	48,639	37,715	32,231
Belgian	27,585	29,711	35,148
Czech and Slovak	30,401	42,912	63,959
Danish	34,118	37,439	42,671
Finnish	43,885	41,683	43.745
German	473,544	464,682	619,995
Greek	9,444	11,692	13,966
Hungarian	40,582	54,598	60,460
Icelandic	19,382	21,050	23,307
Italian	98,173	112,625	152,245
Jewish	156,726	170,241	181,670
Lithuanian	5,876	7,789	16,224
Netherlander	148,962	212,863	264,267
Other European—concluded			
Norwegian	93,243	100,718	119,266
Polish	145,503	167,485	219,845
Roumanian	29,056	24,689	23,601
Russian	88,148	83,708	91,279
Swedish	81,306	85,396	97,780
Ukrainian	225,113	305,929	395,043
Yugoslavic	16,174	21,214	21,404
Other	9,392	9,787	35,616
Asiatic	**84,548**	**74,064**	**72,827**
Chinese	46,519	34,627	32,528
Japanese	23,342	23,149	21,663
Other	14,687	16,288	18,636
Other Origins	**157,925**	**189,723**	**354,028**
Native Indian and Eskimo	128,890	125,521	165,607
Negro	19,456	22,174	18,020
Other and not stated	9,579	42.028[1]	170,401
Totals	**10,376,786**	**11,506,655**	**14,009,429**

[1] Includes 35,416 half-breeds.

Section 10.—Religious Denominations

At each census the numbers of persons attached to any religious denomination, as reported by the persons enumerated, have been recorded. The distribution of the principal denominations for the census years 1931, 1941 and 1951 is given in Table **15**.

15.—Principal Religious Denominations of the Population, Census Years 1931, 1941 and 1951

NOTE.—More detailed figures for the Decennial Censuses 1871–1921 are given in the 1948–49 Year Book, p. 155.

Religious Denomination	1931	1941	1951	
	No.	No.	No.	p.c.
Adventist	16,058	18,485	21,398	0·2
Baptist	443,944	484,465	519,585	3·7
Christian Science	18,499	20,261	20,795	0·1
Church of England in Canada	1,639,075	1,754,368	2,060,720	14·7
Evangelical Church	22,239	37,064	50,900	0·4
Greek Orthodox	102,529	139,845	172,271	1·2
Jewish	155.766	168.585	204,836	1·5
Lutheran	394,920	401,836	444,923	3·2
Mennonite[1]	88,837	111,554	125.938	0·9
Mormon	22,041	25,328	32,888	0·2
Pentecostal	26,349	57,742	95,131	0·7
Presbyterian	872,428	830,597	781,747	5·6
Roman Catholic	4,102,960	4,806,431	6,069,496	43·3
Salvation Army	30,773	33,609	70,275	0·5
Ukrainian (Greek) Catholic	186,879[2]	185,948[2]	190,831	1·4
United Church of Canada	2,021,065	2,208,658	2,867,271	20·5
Other	232,424	221,879	280,424	2·0
Totals	**10,376,786**	**11,506,655**	**14,009,429**	**100·0**

[1] Includes "Hutterite".

[2] Includes "Other Greek Catholic".

Section 11.—Countries of Birth

The census collects information on both country of birth of immigrant arrivals in Canada and province of birth of the native-born. For persons born outside of Canada the country of birth, as constituted at the date of the census, is recorded. Table **16** gives the total population by countries of birth for the census years 1931, 1941 and 1951.

16.—Countries of Birth of the Population, Census Years 1931, 1941 and 1951

Note.—Figures for the Decennial Censuses 1871–1921 are given in the 1948–49 Year Book, p. 158.

Country of Birth	1931	1941	1951
	No.	No.	No.
Canada	8,069,261	9,487,808	11,949,518
United Kingdom	1,138,942[1]	960,125[1]	912,482
Other Commonwealth	45,888	43,644	20,567
Europe	714,462	653,705	801,618
Belgium	17,033	14,773	17,251
Finland	30,354	24,387	22,035
France	16,756	13,795	15,650
Germany	39,163	28,479	42,693
Greece	5,579	5,871	8,594
Italy	42,578	40,432	57,789
Netherlands	10,736	9,923	41,457
Europe—concl.			
Union of Soviet Socialist Republics[2]	133,869	124,402	188,292
Scandinavian countries[3]	90,042	72,473	64,522
Central European countries[4]	317,350	309,360	305,192
Other Europe	11,002	9,810	38,143
Asia	60,608	44,443	37,145
United States	344,574	312,473	282 010
Other countries	3,051	3,512	6,089
Totals	**10,376,786**	**11,506,655[5]**	**14,009,429**

[1] Includes the 26 counties of Ireland in 1931 and 1941. [2] Includes Lithuania and Ukraine. [3] Includes Denmark, Iceland, Norway and Sweden. [4] Includes Austria, Czechoslovakia, Hungary, Yugoslavia, Poland and Roumania. [5] Includes "birthplace not stated".

Section 12.—Languages and Mother Tongues

Official language is not to be confused with mother tongue. Mother tongue is the language a person first spoke in childhood and still understands; official language (a term used herein for census purposes) refers only to the English and French languages. The numbers of persons speaking one, both or neither of the official languages are given in Table 17, classified by province.

17.—Population Speaking One, Both or Neither of the Official Languages, by Province, Census 1951

Note.—Infants are classed as speaking the language of the home.

Province or Territory	Population Speaking—			
	English Only	French Only	English and French	Neither English nor French
	No.	No.	No.	No.
Newfoundland	356,377	153	3,990	896
Prince Edward Island	88,743	914	8,745	27
Nova Scotia	595,257	7,462	39,524	341
New Brunswick	318,560	100,712	96,095	330
Quebec	462,813	2,534,242	1,038,130	20,496
Ontario	4,115,584	78,974	359,965	43,019
Manitoba	685,914	7,869	58,441	24,317
Saskatchewan	767,248	4,656	40,789	19,035
Alberta	868,696	5,922	40,785	24,098
British Columbia	1,112,937	727	39,433	12,113
Yukon Territory	8,337	10	519	230
Northwest Territories	6,929	171	1,031	7,873
Canada	**9,387,395**	**2,741,812**	**1,727,447**	**152,775**

Mother tongue spoken is dealt with in Table **18**, which shows that 1,659,770 persons, at June 1, 1951, had neither English nor French as mother tongue.

18.—Mother Tongues of the Population, Census 1951

NOTE.—Infants are classed as speaking the language of the home.

Mother Tongue	Number	Percentage of Total	Mother Tongue	Number	Percentage of Total
English	8,280,809	59·11	Lithuanian	12,307	0·09
French	4,068,850	29·04	Magyar	42,402	0·30
Chinese	28,289	0·20	Netherlander	87,935	0·63
Danish	15,714	0·11	Norwegian	43,831	0·31
Estonian	8,784	0·06	Polish	129,238	0·92
Finnish	31,771	0·23	Roumanian	10,105	0·07
Flemish	12,623	0·09	Russian	39,223	0·28
Gaelic	13,974	0·10	Serbo-Croatian	11,031	0·08
German	329,302	2·35	Slovak	45,516	0·32
Greek	8,036	0·06	Swedish	36,096	0·26
Icelandic	11,207	0·08	Syrian and Arabic	5,475	0·04
Indian and Eskimo	144,787	1·03	Ukrainian	352,323	2·51
Italian	92,244	0·66	Yiddish	103,593	0·74
Japanese	17,589	0·12	Other	19,356	0·14
Lettish	7,019	0·05			
			Totals	**14,009,429**	**100·00**

Section 13.—Dwellings, Households and Families

A fairly complete summary of the principal statistics on dwellings, households and families recorded at the 1951 Census is given in the 1954 Year Book, pp. 139-145. More detailed information may be found in Vol. III of the *1951 Census.* The subject is only briefly covered in this Section.

Dwellings and Households.*—The 1941 Census of Housing was based on a 10-p.c. sample of dwellings situated within the nine provinces. For the 1951 Census, the size of the sample was increased to 20 p.c. and the coverage included Newfoundland but, as in 1941, did not extend to the Yukon and Northwest Territories. For comparison purposes, Newfoundland is omitted from the 1951 figures in Table **19**.

Table **19** shows that the increase in the number of dwellings during the 1941-51 decade was 11 p.c. higher than the increase in population, thus reducing the number of persons per dwelling from 4·3 to 4·0. Definitional changes between 1941 and 1951 are partly responsible for the relatively larger increase in dwellings, particularly of the apartment and flat type. Since owned dwellings increased by 49·1 p.c. and rented dwellings by only 4·2 p.c., it would appear that many people who were tenants in 1941 have since bought homes, and that most new homes were built for owners rather than for tenant occupancy.

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* 1951 Census definitions are briefly as follows: DWELLINGS.—A *Dwelling* is defined as a structurally separate set of living premises with private entrance from outside the building, or from a common hallway or stairway inside. A *Single Detached Dwelling*, commonly called a single house, is a house containing one dwelling unit and completely separated on all sides from any other building or structure. *Apartments and Flats* include dwelling units in apartment blocks, suites in duplexes or triplexes, suites in structurally converted houses, living quarters located in business premises, janitor's quarters in schools, etc. In determining the number of *Rooms* in a dwelling, only those used or suitable for living purposes, including rooms occupied by servants, lodgers, or members of lodging families, are counted. HOUSING.—A *Household* is a person or group of persons occupying one dwelling unit, the number of households thus equalling the number of occupied dwellings. Every person must be a member of some household, whether it consists of a family group with or without servants, lodgers, etc., a group of unrelated persons sharing a dwelling, or one person living alone. A dwelling is classed in need of *Major Repair* if it possesses any one of the following defects: sagging or rotting foundations indicated by cracked or leaning walls; faulty roof or chimney; unsafe outside steps or stairways; interior badly in need of repair. A *Crowded Dwelling* (or Household) is defined as one in which the number of persons exceeds the number of rooms occupied.

19.—Dwelling Characteristics, Census Years 1941 and 1951

(Excludes Newfoundland and the Territories)

Item	1941	1951	Increase 1941-51	
	No.	No.	No.	p.c.
Population	11,489,713	13,622,913	2,133,200	18·6
Occupied Dwellings[1]	2,575,744	3,338,315	762,571	29·6
Single detached	1,853,454	2,216,275	362,821	19·6
Apartments and flats	533,034	881,245	348,211	65·3
Single attached	189,256	240,795[2]	51,539	27·2
Owned	1,459,357	2,175,415	716,058	49·1
Rented	1,116,387	1,162,900	46,513	4·2
Rooms per dwelling	5·5	5·3	...	...
Persons per dwelling	4·3	4·0	...	...

[1] Exclusive of hotels, institutions, camps, etc.

[2] Includes auto-trailers, houseboats, tents and other miscellaneous types.

The statistics of Table **20** reflect the high level of prosperity throughout the decade in both urban and rural areas. In 1951 a higher percentage of homes had indoor plumbing, electricity and furnace heating, and had such conveniences as mechanical refrigerators, electric vacuum cleaners, telephones, radios and passenger automobiles. There was a sharp drop in the number of homes needing major repair. Washing machines are not shown in Table **20** because there are no comparable 1941 figures but, in 1951, 72·5 p.c. of the dwellings possessed a powered type of washing machine. Though much of this advance may be attributed to general prosperity, part of the explanation of the trend is to be found in the increasing urbanization of the Canadian population and the availability of modern conveniences to rural areas.

20.—Housing Characteristics, Census Years 1941 and 1951

(Excludes Newfoundland and the Territories)

Characteristics	1941		1951		Increase 1941-51	
	No.	P.C. of Total	No.	P.C. of Total	No.	P.C.
Occupied Dwellings—						
In need of major repair	695,736	27·0	450,625	13·5	−245,111	−35·2
Crowded dwellings[1]	148,418	18·4	175,995	16·0	27,577	18·6
Dwellings with—						
Electric lighting	1,780,667	69·1	2,929,450	87·8	1,148,783	64·5
Furnace heating	997,588	38·7	1,632,275	48·9	634,687	63·6
Running water	1,558,586	60·5	2,503,080	75·0	944,494	60·6
Flush toilet[2]	1,342,198	52·1	2,170,815	65·0	828,617	61·7
Bath or shower[2]	1,169,760	45·4	1,926,455	57·7	756,695	64·7
Electric or gas range	1,019,421	39·6	1,696,130	50·8	676,709	66·4
Electric or gas refrigeration	538,535	20·9	1,589,625	47·6	1,051,090	195·2
Electric vacuum cleaner	624,178	24·2	1,409,090	42·2	784,912	125·8
Telephone	1,037,298	40·3	2,013,640	60·3	976,342	94·1
Radio	2,002,889	77·8	3,086,695	92·5	1,083,806	54·1
Passenger automobile	944,591	36·7	1,435,925	43·0	491,334	52·0
Owner-occupied non-farm dwellings reporting a mortgage	275,623	31·2	515,035	30·9	239,412	86·9
Monthly Rent of Tenant-Occupied Non-farm Dwellings—						
Under $30[3]	738,294	75·1	501,540	45·5	−236,754	−32·1
$30–$59	221,189	22·5	437,815	39·8	216,626	97·9
$60 or over	24,034	2·4	162,265	14·7	138,231	575·1

[1] For cities of 30,000 or over only.

[2] For exclusive use of household.

[3] Includes "rent-free" dwellings.

Families.*—The number of families increased at a greater rate during the 1941-51 decade than the general population, with the result that the average number of persons per family dropped from 3·9 to 3·7. Table **21** shows that families with no children or with one or two children increased proportionately at the expense of families with three or more children. It is also interesting to note that the increase in number of families was greater than the increase in the number of children in families. This does not necessarily indicate a trend in the birth rate. Other factors have an important bearing, such as the ageing of the population, the great increase in the marriage rate during the years just prior to the 1951 Census, and the tendency for young people to leave the family home for employment elsewhere.

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* For census purposes, a *Family* consists of husband and wife (with or without children) or a parent with an unmarried child (or children) living together in the same dwelling. Unmarried sons and daughters under 25 years of age and living with their parents are classed as *Children* as well as wards and guardianship children under 21 years of age. Unmarried sons and daughters, 25 years of age or over, living with their parents are counted as family members but not as children.

21.—Family Characteristics, Census Years 1941 and 1951

(Excludes Newfoundland and the Territories)

Item	1941	1951	Increase 1941-51	
	No.	No.	No.	p.c.
Population	11,489,713	13,622,913	2,133,200	18·6
Families	2,525,299	3,207,587	682,288	27·0
Persons per family	3·9	3·7	−0·2	--
Children in families	4,692,571	5,357,344	664,773	14·2
	p.c.	p.c.		
Percentage of families with—				
No children at home	31·2	32·5	...	...
1-2 children	41·1	43·4	...	...
3-4 children	17·0	16·5	...	...
5 or more children	10·7	7·6	...	...

Section 14.—The Blind and Deaf Population

Information was obtained in the 1951 Census for totally blind or deaf persons. Persons blind in one eye, for example, were not recorded as blind and partially deaf persons, such as those able to hear with the help of a mechanical aid, were not included. Table **22** shows the number and proportion of totally blind and deaf persons per 10,000 population in each province and territory. More detailed information on this subject is contained in Vol. II of the *1951 Census.*

22.—Number of Blind and Deaf Persons and Proportion per 10,000 Population, by Province, 1951

Province or Territory	Number			Number per 10,000 Population		
	Blind	Deaf	Blind and Deaf	Blind	Deaf	Blind and Deaf
Newfoundland	513	497	27	14·2	13·8	0·7
Prince Edward Island	104	88	4	10·6	8·9	0·4
Nova Scotia	943	747	43	14·7	11·6	0·7
New Brunswick	744	554	33	14·4	10·7	0·6
Quebec	3,734	5,139	199	9·2	12·7	0·5
Ontario	4,173	3,897	200	9·1	8·5	0·4
Manitoba	712	596	32	9·2	7·7	0·4
Saskatchewan	590	628	29	7·1	7·6	0·3
Alberta	613	556	21	6·5	5·9	0·2
British Columbia	972	907	68	8·3	7·8	0·6
Yukon Territory	8	4	—	8·8	4·4	—
Northwest Territories	18	3	—	11·2	1·9	—
Canada	**13,124**	**13,616**	**656**	**9·4**	**9·7**	**0·5**

Section 15.—Census of the Prairie Provinces

The Census and Statistics Act of 1905 and the Statistics Act of 1918 (replaced by the Statistics Act, 1948) provided for a census of population and agriculture for the Provinces of Manitoba, Saskatchewan and Alberta, to be taken in 1906 and every tenth year thereafter, in addition to the nation-wide decennial census.

The latest Prairie Provinces census was taken as of June 1, 1946, and the results are summarized in the 1948-49 Year Book, pp. 162-171, and in the 1951 Year Book, pp. 130-132. More detailed information is contained in the census volumes of the 1946 Census of the Prairie Provinces.

Section 16.—The Indians and Eskimos of Canada

The Indians.*—Entry of native tribes into North America probably began as early as 15,000 years ago, according to the findings of archæologists. It is believed that roving bands of hunters, driven from their lands in northeastern Asia, crossed into North America by way of Bering Strait. Ethnic origins of the Indians appear to have varied. Though differences in language were many and varied somewhat from tribe to tribe, religious background and traditions seemed to stem from practically the same source.

There are ten linguistic groups of Indians in Canada, of which four are east of the Rocky Mountains—Algonkian, Athapaskan, Iroquoian and Siouan—and six are west of the Rockies—Kootenayan, Salishan, Wakashan, Tsimshian, Haida, and Tlinkit. Indians of Algonkian stock are the most numerous and are scattered throughout the area from the Atlantic seaboard to the Rocky Mountains. Included in the Algonkian stock are such tribes as the Micmacs of the Maritimes, the Montagnais of Quebec and the Ojibwas, Crees and Blackfeet who live in the Prairie Provinces. The Iroquoian stock, which includes the Hurons, is found mainly in Ontario and Quebec, while tribes of Sioux are located in the Prairie Provinces. The Northwest and Yukon Territories are the usual homelands of the Athapaskan.

According to the 1951 Census, there were 155,874 persons of Indian origin in Canada, distributed by province and sex as follows:—

Province	*Male*	*Female*	*Total*
Newfoundland	184	174	358
P. E. Island	136	121	257
Nova Scotia	1,379	1,338	2,717
New Brunswick	1,164	1,091	2,255
Quebec	7,556	7,075	14,631
Ontario	19,025	18,345	37,370
Manitoba	10,642	10,382	21,024
Saskatchewan	11,265	10,985	22,250
Alberta	10,743	10,420	21,163
British Columbia	14,602	13,876	28,478
Yukon	734	799	1,533
N.W.T.	1,913	1,925	3,838
CANADA	79,343	76,531	155,874

These figures include all persons with a paternal ancestor of Indian race, many of whom have long been assimilated and have lost their identity as Indians. The number of persons considered as Indians under Indian legislation is placed (1949) at 136,407. They are divided into about 600 Bands and live on 2,200 or more reserves set aside for their use and benefit.

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* Prepared in the Indian Affairs Branch, Department of Citizenship and Immigration, Ottawa.

Administration.—The primary function of the Indian Affairs Branch, under the Citizenship and Immigration Act and the Indian Act, is to administer the affairs of the Indians of Canada in a manner that will enable them to become increasingly self-supporting and independent. The functions of the Branch include the management of Indian reserves and surrendered lands, trust funds, welfare projects, relief, family allowances, education, descent of property, rehabilitation of Indian veterans on reserves, Indian treaty obligations, enfranchisement of Indians and other matters.

The Indian Act currently in effect was drafted following inquiry into Indian affairs by a Special Joint Committee of the Senate and the House of Commons during 1946, 1947 and 1948, and subsequent conferences with representative Indian groups. Proclaimed Sept. 4, 1951, the new Act succeeds an Act that was first consolidated in 1876 and amended from time to time.

The Indian Act provides a measure of self-government on reserves through Band councils chosen according to tribal custom or under an elective system of secret ballot. The various expenditures of Band funds, with few exceptions, require the consent of the Band council, comprising a chief and councillors. The right to vote in Band elections and other votes is extended to all members of a Band, men and women, who have reached the age of twenty-one years. A number of Indian women have been elected to office since the new Act came into force. Secrecy of voting has been provided under election regulations. The powers of Band councils to make by-laws correspond in a general way with those exercised by councils in a rural municipality.

Indians who are veterans of World Wars I or II and their wives may vote in federal elections. Indians who live off the reserve, under certain circumstances, also have the right to vote, while Indians who live on the reserve may vote if they waive exemption to taxation on personal property such as earnings or other incomes received on the reserve. Indians may sue and be sued, subject to provisions of the Indian Act which exempts from seizure real and personal property held on the reserve.

Enfranchisement, the removal of all legal distinction between Indians and other members of the community, is provided for under the Indian Act. An enfranchised Indian is no longer subject to the provisions of the Act. In order to facilitate enfranchisement of Indian Bands, agreements may be entered into with provincial or municipal authorities to provide financial assistance to indigent, infirm, or aged members of the enfranchised Band.

The nomadic existence followed by Bands of Indian hunters is gradually giving way to a more stable way of life. Many Indians are profitably engaged in the fishing industry on the British Columbia coast; Indians across Canada are being encouraged to engage in agricultural pursuits and are prominent in many other trades and occupations. For example, the reputation of the Indians from the Caughnawaga Reserve, near Montreal, as skilful structural steel workers is known throughout North America.

The Indian Affairs Branch takes a census of the Indian population under its jurisdiction at five-year intervals. The figures for 1949 given in Tables **23** and **24** are the latest available.

23.—Indian Population, classified by Age Group and Sex, by Province, Departmental Census, 1949

Province or Territory	Under 7 Years		7 Years and Under 16		16 Years and Under 21		21 Years and Under 70		70 Years or Over		Totals	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island..	24	20	33	33	16	9	68	58	6	6	147	126
Nova Scotia............	273	243	292	302	123	132	635	544	50	47	1,373	1,268
New Brunswick.........	239	237	253	245	102	111	479	414	33	26	1,106	1,033
Quebec..................	1,587	1,642	1,611	1,655	844	839	3,832	3,407	293	260	8,167	7,803
Ontario..................	3,347	3,351	3,323	3,346	1,758	1,745	8,274	7,996	711	720	17,413	17,158
Manitoba...............	2,023	1,992	1,963	2,024	943	832	3,823	3,349	295	305	9,047	8,502
Saskatchewan..........	1,853	1,869	1,795	1,866	854	811	3,416	3,347	246	251	8,164	8,144
Alberta..................	1,681	1,708	1,626	1,570	693	675	2,844	2,541	201	266	7,045	6,760
British Columbia.......	3,147	3,144	3,003	3,149	1,423	1,412	6,332	5,245	550	531	14,455	13,481
Yukon Territory........	158	171	147	163	67	73	333	286	25	20	730	713
Northwest Territories..	396	338	375	393	189	181	923	842	63	72	1,946	1,826
Totals.............	**14,728**	**14,715**	**14,421**	**14,746**	**7,012**	**6,820**	**30,959**	**28,029**	**2,473**	**2,504**	**69,593**	**66,814**

24.—Religious Denominations of the Indian Population, Departmental Census, 1949

Province or Territory	Church of England	Baptist	United Church	Presbyterian	Roman Catholic	Other Christian Beliefs	Aboriginal Beliefs	Totals
	No.	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island.....	—	—	—	—	273	—	—	273
Nova Scotia..............	—	—	—	—	2,641	—	—	2,641
New Brunswick...........	—	—	—	—	2,139	—	—	2,139
Quebec....................	3,100	—	451	—	12,120	152	147	15,970
Ontario....................	10,529	1,514	6,436	611	12,065	1,110	2,306	34,571
Manitoba..................	5,735	12	4,586	731	6,251	118	116	17,549
Saskatchewan.............	4,980	—	1,682	184	8,402	25	1,035	16,308
Alberta....................	1,963	127	1,708	—	9,768	—	239	13,805
British Columbia.........	5,561	—	5,623	—	15,977	775	—	27,936
Yukon Territory..........	1,191	—	—	—	210	18	24	1,443
Northwest Territories.....	668	—	—	—	3,104	—	—	3,772
Totals................	**33,727**	**1,653**	**20,486**	**1,526**	**72,950**	**2,198**	**3,867**	**136,407**

25.—Indian Lands and Property, by Class and Province, Year Ended Mar. 31, 1954

Province or Territory	Land				Property			
	Under Wood	Cleared but not Cultivated	Under Cultivation	Total Area of Reserves	Private Houses	Churches	Council Houses	Sawmills
	acres	acres	acres	acres	No.	No.	No.	No.
Prince Edward Island.....	1,721	820	200	2,741	53	1	1	—
Nova Scotia..............	24,988	1,493	818	19,492	528	10	1	2
New Brunswick...........	33,089	1,126	292	37,727	432	6	3	1
Quebec....................	138,258	11,595	5,852	179,632	2,111	23	4	2
Ontario....................	1,174,322	105,833	39,659	1,559,349	5,753	112	52	27
Manitoba..................	308,881	153,740	27,885	524,424	3,730	73	18	14
Saskatchewan.............	461,971	593,086	170,079	1,204,562	3,275	58	19	4
Alberta....................	542,862	757,306	159,432	1,516,622	3,159	35	18	3
British Columbia.........	401,834	260,654	40,218	820,988	6,724	156	84	28
Yukon and Northwest Territories..............	3,854	50	13	5,459	175	1	1	—
Totals...........	**3,091,780**	**1,885,703**	**444,448**	**5,870,996**	**25,940**	**475**	**201**	**81**

Education.—The proportion of Indians who have become satisfactorily adjusted to modern conditions is, of course, greater among those who have taken full advantage of the Federal Government's educational program. Residential schools are available to Indian children from broken homes, orphans or those who, because of isolation or the nomadic way of life of their parents, would otherwise be unable to attend school. For children who can live at home, the Federal Government operates day schools in Indian communities. Alternatively, where conditions are favourable, arrangements are made with local educational authorities for Indian children to attend non-Indian schools. An increasing number of Indian children in the elementary grades have been admitted to schools where other children are enrolled and the majority of Indian children attending secondary school and college classes are educated in association with non-Indians. The Federal Government pays the charges for school fees and books, necessary transportation and, for some students who must live away from home, part or all of the cost of room and board.

Similar assistance is given to Indian young people to encourage them to obtain vocational and professional training. Of those who have qualified as school teachers, 52 are now serving in Indian schools. Indians have qualified in medicine, dentistry, nursing, agriculture and other professions. Preference in appointment to positions in the Indian service is given to qualified Indians.

In the year ended Mar. 31, 1954, there were 461 Indian schools in operation, comprising 67 residential schools, 360 regular day schools, 22 seasonal schools and 12 hospital schools. The enrolment in residential schools was 11,090 and in all other schools, 17,084. Enrolment by province was: P.E.I., 47; N.S., 627; N.B., 400; Que., 2,444; Ont., 6,566; Man., 4,045; Sask., 3,791; Alta., 3,697; B.C., 5,793; Y.T., 269; and N.W.T., 495.

26.—Enrolment and Average Attendance at Indian Schools, Years Ended Mar. 31, 1945-54

Year	Residential Schools		Day Schools		All Schools		
	Enrolment	Average Attendance	Enrolment	Average Attendance	Enrolment	Attendance	
						No.	P.C. of Enrolment
1945	8,865	8,006	7,573	5,159	16,438	13,165	80·1
1946	9,149	8,264	9,656	6,779	18,805	15,043	80·0
1947	9,304	8,192	10,318	7,449	19,622	15,641	79·7
1948	8,986	7,863	11,115	8,296	20,101	16,159	80·3
1949	9,368	8,345	12,615	10,414	21,983	18,759	85·3
1950	9,316	8,593	14,093	12,060	23,409	20,653	88·2
1951	9,357	8,779	15,514	13,526	24,871	22,305	89·7
1952	9,844	9,175	15,746	13,673	25,590	22,848	89·3
1953	10,112	9,309	15,837	13,826	25,949	23,135	89·2
1954	11,090	9,516	17,084	14,541	28,174	24,057	85·4

In addition to pupils in Indian schools there were 2,360 Indian children enrolled in elementary grades in provincial and private schools and 1,021 in secondary schools, making a total enrolment of Indians in educational classes of 31,555. In the year ended Mar. 31, 1954, there were 1,621 Indians receiving secondary and higher education.

Welfare.—During 1953, 21,306 Indian families received $3,846,650 in family allowances on behalf of 62,571 children. These payments contributed substantially to a better balanced diet and better clothing for Indian children. Approximately $3,000,000 is paid annually to Indians in the form of blind persons' allowances, old age assistance and old age security payments. When necessary, the Government provides direct relief assistance to Indians in the form of food, fuel, clothing and household equipment. The Indian Affairs Branch also makes arrangements for private foster-home and institutional placement of children, juvenile delinquents, cripples, and unemployable and aged adults; assistance is also provided for unmarried mothers and for the rehabilitation of disabled Indians.

Increasing emphasis is being placed on the importance of the suitable placement of children requiring protection and upon the importance of preventive work in the field of juvenile delinquency.

Policy and procedure regarding provision of special foods as a preventive measure against tuberculosis has been revised providing for substantial increases in the scale of rations allowed. Apart from the humanitarian aspect, the revised policy has as its aim a reduction in the number of new cases. A well-nourished body is not an easy victim of disease.

Improvement in housing conditions has been achieved in recent years through the efforts of the Indians themselves, as a result of expenditures from appropriation of Indian Band funds, and through Veterans' Land Act benefits. Costs of house repairs during the year ended Mar. 31, 1953, amounted to approximately $221,890 and the value of new houses built on the various reserves was estimated at $880,168. Revolving Fund loans are available for the purchase of farm machinery, implements, gas and oil, fencing materials, seed grain, live stock and similar essentials, and also for payment of wages and repairs to buildings and vehicles.

Fur Conservation.—During 1953 the fur-development program, undertaken in co-operation with the various provinces, was continued. Beaver production in Saskatchewan, Manitoba and Ontario increased, approximately 173,000 pelts, with an estimated value of $1,631,000, being taken. In addition, about 1,097,000 muskrats having a value of $1,013,000 were trapped in Manitoba and Saskatchewan. Indian participation in the three provinces from the trapping of these fur-bearers was valued at about $1,832,000. In the Province of Quebec, nine fur preserves with a total area of approximately 150,000 sq. miles are set aside exclusively for Indian trappers under joint management by the Indian Affairs Branch and the Quebec Department of Fish and Game. Five reserves are in production and one in partial production. During 1953, these areas produced over 13,000 beaver, which brought more than $247,000 to the Indian trappers.

Eight full-time supervisors are employed across Canada to assist the Indians to derive the fullest possible benefits from hunting and trapping.

The Eskimos.*—The Eskimos are only a fragment of the total population of Canada, numbering, according to the 1951 Census, only 9,607 persons. However, they are part of the human resources of the country and as such are entitled to the benefits of Canadian citizenship and to assistance in adapting themselves to changing conditions. They, together with the Indians, represent the original inhabitants of Canada and their ingenuity and resourcefulness are illustrated by the fact that they have maintained their existence against a harsh unrelenting climate in a region where food, being almost entirely fish or animal, requires great skill to obtain and is most unpredictable in its availability. Advancing civilization has, however, brought many problems to Canada's northernmost citizens, who have been literally translated from the Stone Age to the Atomic Age in a period of 40 to 50 years, and to these problems the Federal Government has been giving increasing attention.

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* Prepared in the Editorial and Information Division, Department of Northern Affairs and National Resources, Ottawa. *See* also the special article "The Northland—Canada's Challenge", pp. 22-32.

The Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources is responsible for the administration of Eskimo affairs. The Department of National Health and Welfare is responsible for health and medical services. Royal Canadian Mounted Police detachments throughout the north undertake field duties for both Departments. In fact, the problems involved in looking after a sparse Eskimo population scattered over about 900,000 sq. miles of territory requires the continuous co-operation of all northern inhabitants—teachers, missionaries, traders, doctors, nurses, radio operators and weather-station personnel. Administrative contact is maintained by radio and through the Eastern Arctic Patrol which carries representatives of the Administration and other government departments on an annual inspection tour. Officers of the Administration also make periodic visits to Arctic posts by air.

Family allowances are paid to Eskimos in kind from a list designed to supplement rather than to supplant the normal native diet. Eskimos also enjoy the full benefits of old age security and old age assistance payments and of allowances for blind persons.

Missions, assisted by Government grants, operate hospitals at Aklavik, Chesterfield Inlet and Pangnirtung, and the Department of National Health and Welfare has nursing stations at Coppermine, Fort Chimo, Coral Harbour, Port Harrison, Cape Dorset and Lake Harbour. Tuberculosis and other medical surveys are carried out from year to year and treatment, where necessary, is provided either at the hospitals within the territory or at larger institutions outside.

An Arctic Division has been established by the Department of Northern Affairs and National Resources to study and deal expressly with Eskimo problems. This Division has the benefit of the advice of a continuing advisory committee composed of representatives of organizations, government and private, concerned with the Eskimos. Efforts are being made to encourage self-sufficiency of the Eskimo by better utilization of the existing resources of the country and the development of small local industries such as whaling, fishing, boat-building, manufacture of clothing, eiderdown collecting and art handicrafts. Eskimos in over-populated or depleted areas are being encouraged and assisted to move to areas where game is more plentiful or where employment may be found. A fund has been established from which loans may be made to assist Eskimos to carry out approved projects for the betterment of their economy.

Since 1945 the Government has built eight schools primarily for Eskimo children. They are located at centres spread from the Mackenzie delta in the west to northern Quebec—Aklavik, Tuktoyaktuk, Coppermine, Chesterfield Inlet, Coral Harbour, Cape Dorset, Port Harrison and Fort Chimo. Missions, assisted by government grants, also operate schools in many Eskimo settlements as well as two industrial homes, one at Chesterfield Inlet and the other at Pangnirtung, where aged and physically handicapped Eskimos are cared for. Considerable attention has been given in recent years to the study and conservation of the wildlife resources upon which the Eskimo depends for his livelihood. Game preserves have been established where only natives may hunt and trap and encouragement is given to the observance of hunting practices designed to conserve the supply of game and fish.

Section 17.—Statistics of World Population

The figures in the following table are from the United Nations *Statistical Yearbook 1953* and, except where otherwise indicated, are official mid-year estimates for 1952. Area figures include inland waters.

27.—Areas and Populations of the Countries or Areas of the World, 1952

Continent and Country	Area	Population
	sq. miles	'000
Africa		
Self-governing Territories—		
Egypt	386,101[1]	21,425
Eritrea[2]	47,877	1,000[3]
Ethiopia	409,267	15,000[4]
Liberia	43,000	1,510[5]
Libya	679,360	1,150[3]
Union of South Africa	472,667	12,912
Non-self-governing Territories and Dependencies—		
Belgium—		
Belgian Congo	904,994	11,763
France—		
Algeria	846,126	9,140
Comoro Islands	834	166[4]
French Equatorial Africa	969,114	4,440
French Somaliland	8,494	63
French West Africa	1,831,084	17,363[6]
Madagascar	227,738	4,369[4]
Morocco	150,888	8,054[7]
Réunion	969	270
Tunisia	60,166	3,600
Portugal—		
Angola	481,352	4,168
Cape Verde Islands	1,557	158
Mozambique	297,732	5,846
Portuguese Guinea	13,948	523
São Tomé and Principe	372	59
Spain—		
Moroccan Protectorate—		
Northern Zone	7,589	1,013
Southern Zone	10,000[3]	13[3]
North African Possessions	82[3]	142
Spanish Guinea	10,831	202
Spanish West Africa	115,396[p]	52[3,8]
United Kingdom—		
Basutoland	11,715	583
Bechuanaland	274,981	292
Gambia	4,003	285[3]
Gold Coast	78,799	3,999
Kenya	224,952	5,760
Mauritius and dependencies	809	498[4]
Nigeria	339,157	29,600
Northern Rhodesia	290,309	1,980
Nyasaland	48,442	2,463
St. Helena	81	5[3]
Seychelles	156	37
Sierra Leone	27,924	2,000[4]
Somaliland Protectorate	67,997	500[3]
Southern Rhodesia	150,327	2,233
Swaziland	6,704	202
Uganda	93,977	5,262
Zanzibar and Pemba	1,020	272
Africa—concl.		
Trust Territories—		
Cameroons (Br. Adm.)	34,080	1,400
Cameroons (Fr. Adm.)	169,498	3,125[4]
Ruanda - Urundi (Belg. Adm.)	20,916	4,070
Somaliland (Ital. Adm.)	198,276	1,280
Tanganyika (Br. Adm.)	362,675	7,944
Togoland (Br. Adm.)	13,041	410
Togoland (Fr. Adm.)	21,236	1,030
Former Mandated Territory (Un. of S. Afr.)—		
South-West Africa	317,713	424[3]
Condominium—		
Anglo-Egyptian Sudan	967,453	8,766
International Administration—		
Tangier	135	170
America, North		
Self-governing Territories—		
Canada	3,845,632	14,430[7]
Costa Rica	19,695	850
Cuba	44,218	5,469[4]
Dominican Republic	18,816	2,236
El Salvador	13,176	1,986
Guatemala	42,042	2,890[4]
Haiti	10,714	3,200
Honduras	43,277	1,513
Mexico	760,375	26,922
Nicaragua	57,143	1,088[4]
Panama	29,141	841
United States	3,022,275	156,981[7,9]
Non-self-governing Territories and Dependencies—		
Denmark—		
Greenland	840,001[10]	24
France—		
Guadeloupe	687	278[11]
Martinique	425	262[11]
St. Pierre and Miquelon	93	5
Netherlands—		
Netherlands Antilles	366	122[3]
United Kingdom—		
Bermuda	21	38[3,12]
British Honduras	8,867	72
British West Indies	12,498	2,840[3]

For footnotes, *see* end of table, p. 163.

27.—Areas and Populations of the Countries or Areas of the World, 1952—continued

Continent and Country	Area	Population
	sq. miles	'000
America, North—concl.		
Non-self-governing Territories and Dependencies—concl.		
United States—		
Alaska	586,378	182[7,13]
Canal Zone	553	58[7,13]
Puerto Rico	3,435	2,240[7,13]
Virgin Islands	133	24[7,13]
America, South		
Self-governing Territories—		
Argentina	1,084,362	18,056
Bolivia	424,163	3,089
Brazil	3,288,050	54,477
Chile	286,397	5,932
Colombia	439,520	11,768
Ecuador	106,178	3,350
Paraguay	157,047	1,464
Peru	506,190	8,864
Uruguay	72,172	2,353[14]
Venezuela	352,143	5,280[15]
Non-self-governing Territories and Dependencies—		
France—		
French Guiana	35,135	29[11]
Netherlands—		
Surinam	55,144	277[3]
United Kingdom—		
British Guiana	82,997	444
Falkland Islands	4,618	2[3]
Asia		
Self-governing Territories—		
Afghanistan	251,000[3]	12,000[4]
Bahrain	231	112
Bhutan	19,000[3]	300[3]
Burma	261,747	18,859
Ceylon	25,331	7,941
China[16]	3,759,191	463,500[4]
India[17]	1,269,597	367,000
Indochina	272,356	30,500[3]
Indonesia	575,894	78,163
Iran	629,345	19,559
Iraq	168,114	5,100[6]
Israel	8,108	1,607
Japan	142,202	85,500
Jordan[18]	37,264	1,320[4]
Korea	85,248	25,120[19]
Kuwait	8,000	150
Lebanon	4,015	1,320
Maldive Islands	115	86
Mongolian People's Republic	626,000[3]	900[3]
Muscat and Oman	82,008	550
Nepal	54,054	7,000[3]
Pakistan	364,363	75,842[20]
Philippines	115,600	20,631
Qatar	8,500[3]	20
Saudi Arabia	617,762	7,000
Syria	70,014	3,381[21]
Thailand	197,659	19,193
Trucial Oman	5,792	80
Turkey (in Asia)[22]	287,118	19,308[23]
Yemen	75,290	4,500[14]
Asia—concl.		
Non-self-governing Territories and Dependencies—		
France—		
French India	193	327[4]
Netherlands—		
New Guinea	159,375	700
Portugal—		
Macau	6	188
Portuguese India	1,520	640
Portuguese Timor	7,332	453
United Kingdom—		
Aden Colony	80	100[3]
Aden Protectorate	121,996	800
British Borneo	78,682	968[3]
Cyprus	3,572	498
Federation of Malaya	50,598	5,506
Hong Kong	391	2,250[12]
Singapore	292	1,080
Former Mandated Territory (U.K.)—		
Palestine[24]	230[3]	291[3]
Military Government (U.S.)—		
Bonin Islands	40	[25]
Ryukyu Islands	1,291	953
Europe		
Self-governing Territories—		
Albania	11,100	1,246[3]
Andorra	175	5[3]
Austria	32,375	6,949
Belgium	11,779	8,706[7]
Bulgaria	42,796	7,390[3]
Czechoslovakia	49,354	12,340[23]
Denmark[26]	16,578	4,334
Finland	130,120	4,091
France[27]	212,736	42,600[28]
Germany	136,430	69,421[3,7]
Greece	51,182	7,776
Hungary	35,912	9,460[3]
Iceland	39,768	148[7]
Ireland, Republic of	27,136	2,948
Italy	116,225	46,865
Liechtenstein	61	14
Luxembourg	998	302[7]
Monaco	[29]	21
Netherlands	12,505[30]	10,377[7]
Norway	125,065	3,327[7]
Poland	120,359	24,977[23]
Portugal	35,579	8,549
Roumania	91,700	16,300[3]
San Marino	24[3]	13
Spain	194,232	28,306
Sweden	169,932	7,125[7]
Switzerland	15,944	4,815[7]
Turkey (in Europe)[22]	9,068	1,626[23]
United Kingdom[31]	94,209	50,429
England and Wales	58,341	43,940
Northern Ireland	5,459	1,375
Scotland	30,410	5,114
Vatican City	[29]	1[3]
Yugoslavia	99,182	16,729

27.—Areas and Populations of the Countries or Areas of the World, 1952—concluded

Continent and Country	Area	Population
	sq. miles	'000
Europe—concl.		
Non-self-governing Territories and Dependencies—		
Norway—		
Svalbard and Jan Mayen Land	24,101	[32]
United Kingdom—		
Channel Islands	75	103
Gibraltar	2	24[12]
Isle of Man	221	56
Malta and Gozo	122	315[12]
International Administration—		
Trieste (Br.-U.S. Zone of Free Territory)	86	296
Oceania		
Self-governing Territories—		
Australia	2,974,471	8,649[33]
New Zealand	103,469	1,995
Non-self-governing Territories and Dependencies—		
Australia—		
Norfolk Island	14	1
Papua	90,537	374
France—		
French Oceania	1,544	63[20]
New Caledonia	7,202	65[4]
New Zealand—		
Cook Islands	100	15
Niue	100	5
Tokelau	4	2
Oceania—concl.		
Non-self-governing Territories and Dependencies—concl.		
United Kingdom—		
British Solomon Islands	11,500	102[3]
Fiji Islands	7,040	307
Gilbert and Ellice Islands	369	38
Pitcairn	2	[25]
Tonga	269	50[3]
United States—		
American Samoa	76	20[7,13]
Guam	206	75[7,13]
Hawaii	6,423	522[7,13]
Trust Territories—		
Nauru (Aust., N.Z. and Br. Adm.)	8	3
New Guinea (Aust. Adm.)	93,050[30]	1,100
Pacific Islands (U.S. Adm.)	661	57
Western Samoa (N.Z. Adm.)	1,130	84
Condominium—		
New Hebrides (Anglo-French)	5,700	50[3]
Union of Soviet Socialist Republics		
Union of Soviet Socialist Republics	8,598,701	170,467[34]
Byelorussian S.S.R.	*80,155*	*5,568*[35]
Ukrainian S.S.R.	*222,626*	*30,960*[35]

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[1] Inhabited and cultivated area: 13,442 sq. miles. [2] Eritrea became an autonomous state in federation with Ethiopia on Sept. 11, 1952. [3] Unofficial estimate. [4] 1951 estimate. [5] 1937 estimate. [6] 1950 estimate. [7] *De jure* population. [8] Total population, including nomads absent during dry season, unofficially estimated at 82,000. [9] Excludes civilian citizens outside continental United States for an extended period. [10] Area of ice-free portion: 131,931 sq. miles. [11] 1946 Census. [12] Civilian population only. [13] Includes United States armed forces stationed in the area. [14] 1949 estimate. [15] Excludes tribal Indians estimated at 56,705 in 1950. [16] Includes islands of Taiwan (Formosa) and Pescadores (total area 13,885 sq. miles, estimated population in 1951, 7,713,000). [17] Includes Hyderabad (area 82,165 sq. miles, population at 1951 Census 18,700,000) and Kashmir-Jammu (area 92,777 sq. miles, estimated population in 1951, 4,410,000). [18] Includes West Jordan and excludes military personnel and their dependants living on military installations. [19] 1944 estimate. [20] 1951 Census. [21] Excludes nomads and semi-nomads estimated at 288,400 in 1945. [22] 1952 estimates for all Turkey: area 296,185 sq. miles, excluding 3,807 sq. miles of swamps and lakes; population 21,983,000. [23] 1950 Census. [24] "Gaza Strip", i.e., that part of Palestine not included in Israel or Jordan, currently under Egyptian administration. [25] Fewer than 500 inhabitants. [26] Excludes the Faroe Islands (area 540 sq. miles, estimated *de jure* population 32,000). [27] Excludes the Saar (area 991 sq. miles, estimated *de jure* population 965,000) also small border areas (273 sq. miles) ceded by Italy in 1947. [28] Includes allowances of 300,000 for armed forces and 6,000 or merchant seamen outside country at 1946 Census. [29] Less than 0·5 sq. mile. [30] Excludes nland water. [31] Excludes Channel Islands and Isle of Man, shown separately below. [32] Inhabited only during winter season. Population, estimated at 1,164 in 1950, included in *de jure* population of Norway. [33] Excludes full-blooded aborigines, estimated at 47,000 in 1944. [34] 1939 Census igures referring to 1939 territory. The population of territories annexed during 1939-40 was estimated t 23,000,000 in 1940. [35] 1939 Census. Included in totals for Union of Soviet Socialist Republics.

CHAPTER IV.—IMMIGRATION AND CITIZENSHIP

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—IMMIGRATION AND EMIGRATION

Section 1.—Immigration*

A brief summary of the history of immigration is given in the 1948-49 Year Book, pp. 172-173. The following special article gives a picture of Canada's post-war achievements in the field of immigration.

POST-WAR IMMIGRATION

Canada is now well past the one-million mark in numbers of newcomers who, since the end of World War II, have chosen this country as their new place of permanent residence. As of June 30, 1954, the total number of immigrants entering since Jan. 1, 1946, was 1,043,911.

Historically, heavy immigration into Canada and periods of general progress in all fields of economic activity have often gone hand in hand. From 1900 to 1913, for example, immigrants entered Canada at a yearly average rate of nearly 200,000. During World War I, the yearly flow dropped to little more than 71,000. The prosperity of the 1919-30 period saw immigration increase to an annual flow of more than 123,000 but the depression of the 1930's resulted in drastic reduction to an average of approximately 16,000 annually. During World War II only slightly more than an annual average of 12,000 immigrants were received, but in the post-war years of expansion the annual average climbed to 120,000—an average monthly rate of 10,000 and a daily average of more than 329.

Almost one-third of these newcomers arriving in the Jan. 1, 1946 to June 30, 1954 period were British immigrants from overseas countries. Those of English origin numbered 207,325, Scottish 33,239, Irish 71,837 and Welsh 6,500, making a total of 318,901. Immigrants from overseas of northern European origins totalled 298,274, of whom 20,766 were French, 102,232 Netherlanders and 131,545 were of Germanic and Austrian origin. Those from the United States numbered 74,808. Of the remaining 351,928, there were 103,317 of Italian origin, and 58,785 were of Polish ethnic origin.

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* Revised in the Immigration Branch under the direction of Laval Fortier, Deputy Minister, Department of Citizenship and Immigration, Ottawa.

Among the immigrants were 165,697 displaced persons and refugees, whose move to Canada was dictated initially by the motive of finding a country in the free world in which they could start life afresh. The great majority of the 1,043,911, however, emigrated to Canada only after serious consideration of all the factors involved in leaving situations that offered a certain amount of security and in pitting their skills and energies to the building of a new life with a more rewarding future.

Ontario drew by far the largest number of immigrants; on arrival, 542,542 immigrants gave that Province as their intended destination. Quebec absorbed 205,308 of the newcomers and British Columbia received the next largest group, 92,124. Other provinces received the following numbers: Alberta, 82,052; Manitoba, 53,020; Saskatchewan, 32,000; Nova Scotia, 20,577; New Brunswick, 11,644; Prince Edward Island, 2,332; and Newfoundland, 1,867. Four hundred and forty-five of the immigrants were bound for the Yukon or for the Northwest Territories.

Males out-numbered females among the immigrants by approximately 83,000 in the post-war flow—males numbered 563,300 and females 480,611. Most numerous among the adults were those in the age-group 30-39 who totalled 91,756, those in the 20-24 group numbered 87,707 and those in the 25-29 group 84,442. Children 14 years of age and under numbered 115,077.

Workers among the newcomers totalled 565,782 and with them came 478,129 dependants including 217,471 wives and 247,675 children. The other dependants were mainly aged parents.

The largest individual group among the 1,043,911 immigrants were skilled workers who, by filling vacancies for which Canadians could not be found and training young native-born workers to perform more complex operations, have helped to maintain and to accelerate Canada's industrial tempo. The approximate total of skilled workers was 142,000. About 128,000 immigrants went directly into jobs on Canadian farms and a high percentage of them have remained on the land. It is estimated that 10,000 have now succeeded in taking over Canadian farms either as outright owners or as tenants with agreements to purchase, which indicates the value accruing from the immigration of people with agricultural background.

Some 35,000 immigrants were listed in the managerial and professional category and this group included many of those who have succeeded in establishing business undertakings fostered by the combination of skills brought with them from their homelands and the will to succeed in this country. The sizes of these businesses, located in all parts of the country, range from an industry employing more than 4,000 workers to small-scale undertakings employing two or three to thirty or forty.

The impact on the Canadian economy of 1,000,000 new Canadians has been tremendous, comparable to that which would result from the sudden addition to the country of a province with a population considerably larger than that of Alberta as established by the 1951 Census. For example, during 1953 alone, immigrants brought with them to Canada an estimated $75,000,000, increasing to $415,000,000 the total of capital imported directly through immigration since Jan. 1, 1946.

At the date of the 1951 Census, 62,160 households had been established throughout Canada by post-war immigrant arrivals; 24,000 of these households were in homes owned by the newcomers and 7,000 of them were mortgage-free. Of the household units, 43,000 had either gas or electric ranges, 32,000 were equipped with power washing machines, and 52,000 had radios. Mechanical refrigeration served 26,000 households, and 18,000 units operated electric vacuum cleaners. One out of every three householders owned an automobile. Estimates of food costs in Canada on the basis of urban food expenditure sample surveys, indicate that the average food expenditure per person, weekly, is about $6.70. Thus the 1,000,000 new consumers spend approximately $6,700,000 each week or $350,000,000 annually for food alone. Consider also the purchase of clothing, furniture, farm machinery and other products on the Canadian market by 1,000,000 immigrants, and some conception of the magnitude of their tangible contribution to domestic trade and industry may be obtained.

Immigrants have also made rich contributions to Canada's musical and artistic life. They are to be found in responsible positions in hospitals and laboratories, adding their skill and knowledge to the processes of healing. In Canadian universities and schools, immigrant students are gaining their share of scholarships and prizes for academic merit. These contributions cannot be measured in terms of dollars and cents; their full value will be recognized more by future generations than they are by Canadians of the present day.

Immigration Policy and Operation.—The post-war immigrants were brought to Canada through a flexible immigration policy administered for the Federal Government by the Immigration Branch of the Department of Citizenship and Immigration. The regulations established by authority of the recently revised Immigration Act give right of entry only to British subjects, United States citizens, and citizens of France provided they are of good health and character and have sufficient means to maintain themselves until they are established in this country. All others, with the exception of Asians, whose admission is covered by established procedures, are admissible if they are found to be suitable and desirable. Suitability and desirability are established in part by social, economic and labour conditions in this country. Prospective immigrants should be of a type that will become readily integrated into the community and that will be able to assume the duties and responsibilities of Canadian citizenship within a reasonable time after admission.

To implement these regulations, the Immigration Branch maintains examining officers at 20 overseas posts: at London, Liverpool, Glasgow and Belfast in the United Kingdom; at Dublin, Republic of Ireland; and at Paris, Brussels, Berne, The Hague, Oslo, Copenhagen, Stockholm, Helsinki, Hanover, Karlsruhe, Linz, Rome, Athens, New Delhi and Hong Kong. Personnel at these posts are continually advised of economic conditions and settlement possibilities in Canada and, through a system of rotation and training, are returned to Canada from time to time for cross-country tours which enable them to keep up with developments. Specially trained officers are directly engaged in placement and settlement work in Canada, and close liaison is maintained between overseas posts and the various immigration offices in Canada. There are 344 ports of entry on both coasts and along the International Boundary to handle the immigration movement and, in addition, the heavy tourist traffic.

Subsection 1.—Immigration Policy and Administration

The subject of immigration policy and the administration thereof is dealt with briefly in the special article above.

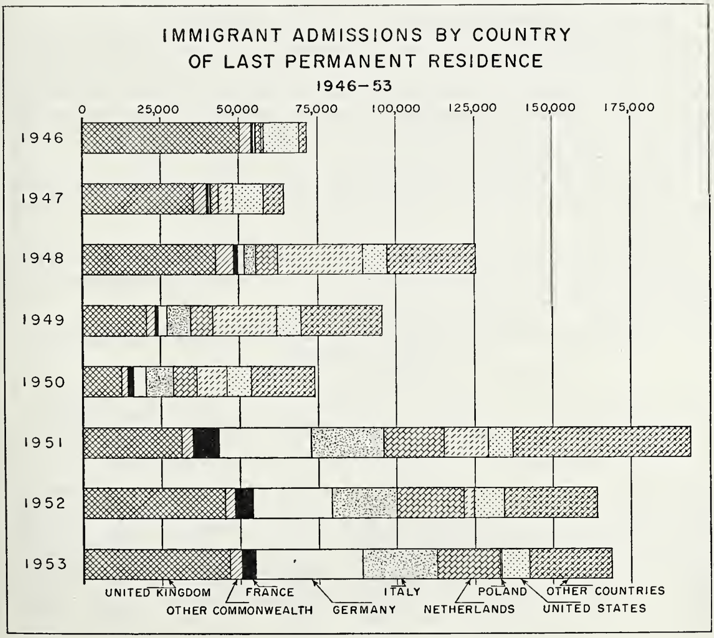
Subsection 2.—Immigration Statistics

Table **1** presents statistics of immigration to Canada from 1909 to 1953. Analyses showing country of last permanent residence, sex, age, marital status, birthplace, origin, nationality, destination and occupation for recent years are given in Tables **2** to **8**.

1.—Immigrant Arrivals, 1909-53

NOTE.—Figures for 1852-93 are given in the 1942 Year Book, p. 153, and for 1894-1908 in the 1948-49 edition, p. 175.

Year	Arrivals	Year	Arrivals	Year	Arrivals	Year	Arrivals	Year	Arrivals
	No.		No.		No.		No.		No.
1909....	173,694	1918.....	41,845	1927.....	158,886	1936.....	11,643	1945.....	22,722
1910....	286,839	1919.....	107,698	1928.....	166,783	1937.....	15,101	1946.....	71,719
1911....	331,288	1920.....	138,824	1929.....	164,993	1938.....	17,244	1947.....	64,127
1912....	375,756	1921.....	91,728	1930.....	104,806	1939.....	16,994	1948.....	125,414
1913....	400,870	1922.....	64,224	1931.....	27,530	1940.....	11,324	1949.....	95,217
1914....	150,484	1923.....	133,729	1932.....	20,591	1941.....	9,329	1950.....	73,912
1915....	36,665	1924.....	124,164	1933.....	14,382	1942.....	7,576	1951.....	194,391
1916....	55,914	1925.....	84,907	1934.....	12,476	1943.....	8,504	1952.....	164,498
1917....	72,910	1926.....	135,982	1935.....	11,277	1944.....	12,801	1953.....	168,868



2.—Immigrant Admissions, by Country of Last Permanent Residence, 1949-53

Note.—Comparable figures for 1946-48 are given in the 1951 Year Book, p. 143, and figures in less detail for 1939-45 in the 1950 edition, p. 186.

Country	1949	1950	1951	1952	1953
	No.	No.	No.	No.	No.
British Isles—					
England	14,414	9,077	21,155	31,776	31,929
Northern Ireland	1,058	626	1,154	2,671	4,255
Scotland	4,926	2,802	8,885	10,025	9,683
Wales	339	164	365	588	707
Other Commonwealth	2,301	2,211	3,494	3,473	4,238
Totals, Commonwealth	23,038	14,880	35,053	48,533	50,812
Republic of Ireland	927	452	640	947	2,121
Continental Europe—					
Czechoslovakia	2,815	1,698	3,385	514	27
France	1,163	1,399	8,279	5,395	4,045
Germany	2,941	3,815	29,196	25,716	34,193
Italy	7,728	8,993	23,426	20,651	23,704
Netherlands	6,828	7,169	19,266	21,068	20,341
Poland	20,091	9,747	14,245	3,358	136
Union of Soviet Socialist Republics[1]	9,578	5,467	10,155	1,969	69
Other European countries	10,593	9,626	37,430	19,253	17,750
United States[2]	7,756	7,821	7,755	9,333	9,407
Other countries	1,759	2,845	5,561	7,761	6,263
Totals, All Countries	**95,217**	**73,912**	**194,391**	**164,498**	**168,868**

[1] In both Europe and Asia; includes Estonia, Latvia and Lithuania.

[2] Includes U.S.A. citizens on permit but applying for permanent residence.

Sex, Age and Marital Status.—Of the total immigrants 18 years of age or over entering Canada in 1953, 55 p.c. were males. Before 1931, adult male immigrants normally exceeded females in number, but from 1931 to 1946 female immigrants out-numbered male immigrants almost consistently, particularly in 1945 and 1946 when the wives of Canadian service men were coming in. From 1947 to 1950 adult males again exceeded females by from 10 to 27 p.c., in 1951 by 80 p.c., in 1952 by 24 p.c. and in 1953 by 21 p.c.

Throughout the years the sex distribution of immigrants under 18 years of age has been fairly even. In 1953, of the 44,174 persons in this class, 38,321 were under 15 years of age.

Of the total male immigrants in 1953, 39 p.c. were married and 60 p.c. single, the remainder being widowed or divorced; the percentages for married and single female immigrants were 45 and 50, respectively.

3.—Sex Distribution of Immigrants as Adult Males, Adult Females, and Children, 1944-53

Note.—Figures for 1930-43 are given in the 1946 Year Book, p. 183.

Year	Adult Males	Adult Females	Under 18 Years		Total
			Males	Females	
	No.	No.	No.	No.	No.
1944	2,391	6,253	2,103	2,054	12,801
1945	4,259	11,620	3,442	3,401	22,722
1946	9,934	40,818	10,549	10,418	71,719
1947	27,281	24,787	6,154	5,905	64,127
1948	52,986	45,191	14,104	13,133	125,414
1949	39,044	32,957	12,118	11,098	95,217
1950	30,700	24,172	10,287	8,753	73,912
1951	95,818	53,239	24,348	20,986	194,391
1952	66,083	53,443	23,766	21,206	164,498
1953	68,269	56,425	23,153	21,021	168,868

4.—Sex and Marital Status of Immigrant Arrivals, by Age Group, 1952 and 1953

Year and Age Group	Males					Females				
	Single	Married	Widowed	Divorced	Total	Single	Married	Widowed	Divorced	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1952										
0–14 years......	20,743	—	—	—	20,743	18,911	1	—	—	18,912
15–19 "	6,093	41	—	—	6,134	3,981	456	1	1	4,439
20–24 "	11,584	1,745	5	9	13,343	5,172	5,065	11	33	10,281
25–29 "	8,811	7,414	25	71	16,321	3,608	9,159	59	138	12,964
30–39 "	4,542	14,175	78	234	19,029	2,261	11,786	298	372	14,717
40–49 "	1,105	8,445	132	179	9,861	818	6,034	536	341	7,729
50–59 "	221	2,696	149	50	3,116	265	2,159	876	174	3,474
60 years or over..	82	925	269	26	1,302	167	625	1,293	48	2,133
Totals, 1952...	**53,181**	**35,441**	**658**	**569**	**89,849**	**35,183**	**35,285**	**3,074**	**1,107**	**74,649**
1953										
0–14 years......	19,901	—	—	—	19,901	18,419	1	—	—	18,420
15–19 "	7,293	60	1	—	7,354	5,030	628	—	—	5,658
20–24 "	13,907	2,342	6	11	16,266	6,757	5,731	11	45	12,544
25–29 "	8,668	7,775	20	95	16,558	4,190	8,561	43	183	12,977
30–39 "	4,102	14,011	62	317	18,492	2,632	11,507	275	422	14,836
40–49 "	838	7,787	103	222	8,950	827	5,844	486	362	7,519
50–59 "	201	2,387	81	71	2,740	254	2,111	833	160	3,358
60 years or over..	46	863	237	15	1,161	142	626	1,313	53	2,134
Totals, 1953...	**54,956**	**35,225**	**510**	**731**	**91,422**	**38,251**	**35,009**	**2,961**	**1,225**	**77,446**

Birthplace.—British-born immigrants to Canada in 1953 numbered 47,662 and made up 28 p.c. of the total immigration; the increase over 1952 amounted to 6 p.c. Immigrants born in Continental Europe totalled 106,387, constituting an increase of 1 p.c. over the previous year. They accounted for 63 p.c. of the total immigration compared with 64 p.c. in 1952. Of the 106,387, 25·2 p.c. were born in Germany, 22·6 p.c. in Italy and 18·7 p.c. in The Netherlands. The number of United States-born immigrants in 1953 was slightly lower than in 1952, accounting for 4·4 p.c. of the total as compared with 4·6 p.c. in the previous year.

5.—Birthplaces of Immigrant Arrivals, 1951-53

NOTE.—Figures for 1942-50 are given in the corresponding table of previous Year Books beginning with the 1948-49 edition.

Country of Birth	1951	1952	1953
	No.	No.	No.
Commonwealth—			
British Isles—			
England	18,723	26,221	26,943
Northern Ireland	1,302	2,826	4,438
Scotland	9,199	10,611	10,101
Wales	635	1,049	978
Lesser Isles	99	137	158
Other Commonwealth—			
Africa (British)	196	330	702
Australia	462	667	1,002
Canada	719	795	686
India	369	468	533
New Zealand	199	227	311
West Indies (British)	584	673	845
Other	1,754	938	965
Republic of Ireland	938	1,516	2,805
Continent of Africa (other than British)	234	287	304
Continent of North America—			
Central America	20	31	34
Mexico	38	121	131
United States	5,982	7,603	7,388
Other	98	109	82
Continent of South America	350	501	633
Continent of Asia—			
China	2,967	2,510	2,045
Israel	—	539	345
Japan	19	34	69
Other	714	539	545
Continent of Europe—			
Austria	4,091	3,112	4,168
Belgium	4,235	1,941	1,689
Czechoslovakia	4,401	1,893	1,594
Denmark	—	2,030	1,531
Finland	—	2,276	1,207
France	7,198	4,505	3,292
Germany	24,257	20,423	26,788
Greece	2,758	1,542	1,947
Hungary	5,099	1,999	1,737
Italy	23,806	20,930	24,059
Latvia	2,679	1,545	705
Lithuania	1,519	898	402
Netherlands	18,781	20,850	19,933
Norway	925	1,193	922
Poland	17,907	8,839	6,040
Roumania	2,930	2,057	2,084
Switzerland	1,337	1,518	1,024
Union of Soviet Socialist Republics[1]	4,489	2,769	1,531
Yugoslavia	5,651	3,106	3,543
Other	16,417	2,106	2,191
Grand Totals	**194,391**[2]	**164,498**[3]	**168,868**[4]

[1] In both Europe and Asia.

[2] Includes 8 born at sea and 302 others not stated.

[3] Includes 4 born at sea and 230 others not stated.

[4] Includes 8 born at sea and 430 not stated.

Origin.—Of the 51,962 immigrants of British stock entering Canada in 1953, 59·7 p.c. were English, 21·8 p.c. Scottish, 16·7 p.c. Irish and 1·8 p.c. Welsh. Immigrants of Continental European stocks, who together numbered 114,075 and accounted for 67·6 p.c. of the total, were 31·8 p.c. German, 21·5 p.c. Italian, 18·2 p.c. Netherlanders, 3·8 p.c. Jewish, 3·4 p.c. French, 3·1 p.c. Austrian and 2·9 p.c. Polish.

6.—Origins of Immigrant Arrivals, 1951-53

NOTE.—Figures for 1926-50 are given in the corresponding table of previous Year Books beginning with the 1939 edition.

Origin	1951	1952	1953
	No.	No.	No.
British—			
English	21,348	29,341	31,018
Irish	3,373	5,901	8,669
Scottish	10,002	11,693	11,317
Welsh	638	937	958
Totals, British	**35,361**	**47,872**	**51,962**
Continental European—			
Albanian	56	20	14
Austrian	[1]	[1]	3,612
Belgian	2,655	1,375	1,453
Bulgarian	362	114	55
Czech	3,199	1,009	603
Estonian	4,599	948	459
Finnish	4,158	2,308	1,252
French	6,949	5,000	3,830
Continental European— con.			
German	33,234[2]	29,344[2]	36,241
Greek	2,918	1,750	2,112
Italian	24,532	21,554	24,547
Jewish	7,167	5,682	4,300
Lettish	2,846	1,462	595
Lithuanian	1,351	786	299
Magyar	4,421	1,514	919
Maltese	1,604	694	749
Netherlander	19,405	21,515	20,782
Polish	13,078	5,638	3,308
Portuguese	166	262	568
Roumanian	1,000	401	289
Russian	2,305	1,109	527
Scandinavian—			
Danish	4,663	2,140	1,642
Icelandic	23	45	55

For footnotes, *see* end of table.

6.—Origins of Immigrant Arrivals, 1951-53—concluded

Origin	1951	1952	1953	Origin	1951	1952	1953
	No.	No.	No.		No.	No.	No.
Continental European—concl.				**Other**—concluded			
Scandinavian—concl.				Chinese	2,708	2,320	1,936
				East Indian	99	172	140
Norwegian	1,036	1,371	1,097	Indian (American)	26	20	14
Swedish	949	686	612	Japanese	3	7	49
Spanish[3]	701	356	294	Mexican	17	12	7
Swiss[4]	1,096	1,314	863	Negro	165	163	264
Ukrainian	6,949	2,859	957	Persian	7	11	20
Yugoslavic[3]	4,175	2,205	2,041	Syrian	229	242	227
				Turkish	19	19	36
Totals, Continental European	**155,597**	**113,461**	**114,075**	Not stated	22	49	46
Other—				**Totals, Other**	**3,433**	**3,165**	**2,831**
Arabian	52	73	18	**Grand Totals**	**194,391**	**164,498**	**168,868**
Armenian	86	77	74				

[1] Included with German. [2] Includes Austrian. [3] Includes a small number of minor groups.
[4] Reported as "Swiss" origin but evidently one of the constituent races such as German, French, Italian, etc.

Nationality.—The nationalities of immigrants entering Canada during the years 1951, 1952 and 1953 are shown in Table 7.

7.—Nationalities of Immigrant Arrivals, 1951-53

NOTE.—Figures for 1930-50 are given in the corresponding table of previous Year Books beginning with the 1936 edition.

Nationality	1951	1952	1953	Nationality	1951	1952	1953
	No.	No.	No.		No.	No.	No.
African (not British)	42	63	53	Lithuanian	1,373	727	251
Albanian	58	17	16	Mexican	30	58	67
Argentinian	20	57	108	Netherlander	19,137	21,182	20,506
Armenian	9	7	3	Norwegian	916	1,202	908
Austrian	3,628	2,867	4,224	Paraguayan	16	33	14
Belgian	3,086	1,477	1,540	Persian	18	15	17
Brazilian	27	28	18	Peruvian	3	3	4
British	34,790	45,685	49,036	Polish	20,408	7,709	2,870
Bulgarian	395	120	50	Portuguese	42	82	247
Central American	16	20	20	Roumanian	2,344	1,127	656
Chilean	9	11	14	Russian	3,744	1,437	495
Chinese	2,689	2,269	1,897	Spanish American, *n.e.s.*	40	46	48
Czechoslovakian	3,905	1,180	465	Spanish	552	152	138
Danish	4,666	2,040	1,536	Swedish	796	511	494
Ecuadorian	3	4	8	Swiss	1,267	1,515	1,007
Estonian	4,748	883	362	Syrian	263	252	202
Finnish	3,949	2,272	1,220	Turkish	54	56	33
French	6,811	4,511	3,368	Ukrainian	705	557	310
German	25,813	24,410	33,337	United States	6,904	8,638	8,395
Greek	2,802	1,619	2,012	Uruguayan	5	3	2
Hungarian	5,210	1,542	809	Venezuelan	9	38	35
Icelandic	17	33	52	West Indian (not British)	48	40	27
Irish Republican	669	1,138	2,401	Yugoslavic	5,573	2,880	2,549
Israeli	333	1,385	2,014	Other	183	309	315
Italian	23,432	20,851	24,146				
Japanese	4	4	48	**Totals**	**194,391**	**164,498**	**168,868**
Latvian	2,830	1,433	521				

Intended Destination and Occupation.—Experience has shown that not all immigrants reach the province of intended destination or follow intended occupation. Table 8 gives intended destination and occupation as stated by the immigrants entering Canada in 1953. Of the total immigrants, 43 p.c. were dependent wives and children, 10 p.c. were classed as farm workers, 16 p.c. as manufacturing, mechanical and construction workers, 6 p.c. as general labourers and 5 p.c. were in the professional class.

Of the total female immigrants, aside from dependent wives and children who accounted for 66 p.c., domestic servants comprised the largest part of the service occupational class which was followed by the clerical and professional classes.

8.—Intended Destinations and Occupations of Immigrants Admitted to Canada, 1953

Intended Occupation	Intended Destination																						Canada		
	N'f'ld.		P.E.I.		N.S.		N.B.		Que.		Ont.		Man.		Sask.		Alta.		B.C.		Yukon and N.W.T.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Managerial (Owners, managers, officials)	**11**	—	—	—	**10**	—	**12**	—	**271**	**13**	**531**	**27**	**26**	**2**	**19**	**1**	**94**	**8**	**143**	**7**	**1**	—	**1,118**	**58**	**1,176**
Professional—																									
Accountants and auditors	3	—	—	—	1	1	1	—	77	6	173	12	10	—	5	—	20	1	32	1	—	—	322	21	343
Architects	—	—	—	—	2	—	—	—	31	5	66	3	2	—	2	—	5	—	17	—	—	—	125	8	133
Chemists (other than pharmacists)	1	—	—	—	1	—	1	—	66	6	127	11	6	1	1	—	14	—	11	1	—	—	228	19	247
Dentists	—	—	—	—	—	—	—	—	7	5	14	—	—	—	—	—	2	—	3	1	—	—	26	6	32
Draughtsmen and designers	2	—	—	—	8	—	3	—	172	18	403	33	11	1	—	3	24	—	26	3	—	—	649	58	707
Aeronautical engineers	1	—	—	—	1	—	—	—	42	1	98	—	2	—	1	—	—	—	10	—	—	—	155	1	156
Chemical engineers	—	—	—	—	1	—	—	—	16	—	43	—	—	—	—	—	3	—	7	—	—	—	70	—	70
Civil engineers (and other prof. engineers, *n.e.s.*)	1	—	—	—	3	—	1	—	158	—	262	1	6	—	4	—	36	—	47	—	—	—	518	1	519
Forestry engineers	—	—	—	—	—	—	—	—	4	—	14	—	—	—	1	—	4	1	3	—	—	—	26	1	27
Electrical engineers	1	—	—	—	4	—	1	—	114	—	218	—	8	—	2	—	13	—	27	—	—	—	388	—	388
Mechanical engineers	8	—	—	—	4	—	1	—	127	—	267	—	9	—	5	—	30	—	32	—	—	—	483	—	483
Metallurgical engineers	—	—	—	—	—	—	—	—	2	—	9	—	—	—	—	—	—	—	1	—	—	—	12	—	12
Mining engineers	—	—	—	—	1	—	—	—	10	—	27	—	1	—	2	—	8	—	8	—	1	—	58	—	58
Laboratory technicians and assistants, *n.e.s*	3	—	—	1	—	—	1	—	44	7	100	44	4	2	1	1	6	6	10	7	—	—	169	68	237
Nurses	—	29	—	2	2	10	1	4	12	218	42	742	5	65	1	26	9	97	4	85	—	—	76	1,278	1,354
Physicians and surgeons	15	1	2	—	8	—	4	—	57	11	95	21	21	2	25	3	36	6	29	3	—	—	292	47	339
Teachers and professors	7	7	—	1	4	9	6	2	67	75	128	134	15	15	8	11	25	28	47	49	1	—	308	331	639
Other professional workers	22	8	5	—	34	11	19	14	533	234	1,106	313	70	24	72	4	260	64	221	77	7	3	2,349	752	3,101
Totals, Professional	**64**	**45**	**7**	**4**	**74**	**31**	**39**	**20**	**1,539**	**586**	**3,192**	**1,314**	**170**	**110**	**130**	**48**	**495**	**203**	**535**	**227**	**9**	**3**	**6,254**	**2,591**	**8,845**
Clerical—																									
Stenographers and typists	—	3	—	—	—	14	—	10	15	448	36	1,193	1	39	—	20	3	81	4	162	—	2	59	1,972	2,031
Other clerical workers	12	8	3	1	19	13	7	4	570	348	1,377	1,199	76	40	19	24	142	80	205	159	1	1	2,431	1,877	4,308
Totals, Clerical	**12**	**11**	**3**	**1**	**19**	**27**	**7**	**14**	**585**	**796**	**1,413**	**2,392**	**77**	**79**	**19**	**44**	**145**	**161**	**209**	**321**	**1**	**3**	**2,490**	**3,849**	**6,339**
Transportation—																									
Air pilots, captains and mates, railway conductors, locomotive engineers, etc.	5	—	—	—	6	—	3	—	46	—	89	1	2	—	2	—	11	—	27	—	1	—	192	1	193
Other transport workers	9	1	—	—	33	—	5	—	228	2	788	8	52	—	16	—	90	—	125	5	2	—	1,348	16	1,364
Totals, Transportation	**14**	**1**	—	—	**39**	—	**8**	—	**274**	**2**	**877**	**9**	**54**	—	**18**	—	**101**	—	**152**	**5**	**3**	—	**1,540**	**17**	**1,557**

Communication	**3**	—	—	—	**2**	**1**	**1**	**1**	**30**	**23**	**75**	**115**	**4**	**2**	**3**	**4**	**6**	**7**	**8**	**13**	—	—	**132**	**166**	**298**
Commercial—																									
Commercial travellers and salesmen	4	—	—	—	6	1	3	—	229	16	629	33	20	—	14	2	71	6	84	7	—	—	1,060	65	1,125
Sales clerks	2	2	—	1	2	9	1	3	47	83	156	375	11	14	2	5	16	29	16	44	—	—	253	565	818
Other trading workers	4	—	—	—	10	1	6	3	239	30	469	91	20	3	10	5	51	10	124	25	—	—	933	168	1,101
Totals, Commercial	**10**	**2**	—	**1**	**18**	**11**	**10**	**6**	**515**	**129**	**1,254**	**499**	**51**	**17**	**26**	**12**	**138**	**45**	**224**	**76**	—	—	**2,246**	**798**	**3,044**
Financial	—	—	—	—	**1**	—	—	—	**43**	**1**	**61**	**4**	—	—	**1**	—	**8**	—	**20**	**2**	—	—	**134**	**7**	**141**
Service—																									
Barbers, hairdressers, manicurists	—	—	—	1	1	—	2	1	53	48	154	99	9	5	9	4	9	7	11	14	—	—	248	179	427
Nurses' aides	—	1	—	—	—	4	—	1	8	236	16	143	3	12	1	2	4	17	4	25	—	—	36	441	477
Cooks	—	1	—	—	4	—	1	2	134	38	137	63	40	7	13	6	23	9	27	7	—	—	379	133	512
Domestic servants	—	13	—	8	2	99	—	79	154	3,917	64	4,662	11	454	1	173	12	680	8	490	—	4	252	10,579	10,831
Other non-professional service workers	3	—	1	—	79	6	3	2	254	65	623	172	51	14	17	5	76	15	102	28	2	1	1,211	308	1,519
Totals, Service	**3**	**15**	**1**	**9**	**86**	**109**	**6**	**85**	**603**	**4,304**	**994**	**5,139**	**114**	**492**	**41**	**190**	**124**	**728**	**152**	**564**	**2**	**5**	**2,126**	**11,640**	**13,766**
Agricultural—																									
Farmers and agriculturists	1	—	3	—	12	—	1	—	34	—	175	1	16	—	14	—	65	—	64	1	—	—	385	2	387
Farm labourers	3	—	88	—	285	6	200	27	3,327	276	6,939	209	1,119	79	705	23	2,284	331	924	38	—	—	15,874	989	16,863
Totals, Agricultural	**4**	—	**91**	—	**297**	**6**	**201**	**27**	**3,361**	**276**	**7,114**	**210**	**1,135**	**79**	**719**	**23**	**2,349**	**331**	**988**	**39**	—	—	**16,259**	**991**	**17,250**
Fishing, Trapping and Logging—																									
Fishermen	—	—	3	—	12	—	1	—	3	—	6	—	—	—	—	—	—	—	15	—	—	—	40	—	40
Trappers	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
Bushmen and lumbermen	1	—	—	—	5	—	8	—	79	—	128	—	15	—	4	—	16	—	118	—	—	—	374	—	374
Totals, Fishing, etc.	**1**	—	**3**	—	**17**	—	**9**	—	**83**	—	**134**	—	**15**	—	**4**	—	**16**	—	**133**	—	—	—	**415**	—	**415**
Mining—																									
Miners	1	—	—	—	6	—	1	—	50	1	203	—	13	—	5	—	59	—	47	—	1	—	386	1	387
Oil field workers	—	—	—	—	—	—	1	—	12	—	13	—	2	—	4	—	27	—	7	—	—	—	66	—	66
Other workers in mines, quarries	—	—	—	—	—	—	—	—	2	—	3	—	—	—	—	—	3	—	3	—	—	—	11	—	11
Totals, Mining	**1**	—	—	—	**6**	—	**2**	—	**64**	**1**	**219**	—	**15**	—	**9**	—	**89**	—	**57**	—	**1**	—	**463**	**1**	**464**

8.—Intended Destinations and Occupations of Immigrants Admitted to Canada, 1953—concluded

Intended Occupation	Intended Destination																						Canada		
	N'f'ld.		P.E.I.		N.S.		N.B.		Que.		Ont.		Man.		Sask.		Alta.		B.C.		Yukon and N.W.T.				
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Manufacturing, Mechanical and Construction—																									
Aircraft mechanics and repairmen	1	—	—	—	7	—	1	—	94	1	341	2	10	—	—	—	17	—	11	—	—	—	482	3	485
Automobile mechanics and repairmen	2	—	—	—	15	—	9	—	325	—	984	1	137	—	54	—	167	—	106	1	2	—	1,801	2	1,803
Bakers	2	—	1	—	11	1	—	—	158	1	389	18	81	3	20	—	88	2	66	1	—	—	816	26	842
Blacksmiths, hammermen, forgemen	1	—	—	—	1	—	—	—	38	—	126	—	21	—	4	—	29	—	12	—	—	—	232	—	232
Boilermakers, platers	—	—	—	—	3	—	—	—	21	—	57	1	1	—	—	—	8	—	7	—	—	—	97	1	98
Brick and stone masons	8	—	—	—	11	—	4	—	202	1	759	6	53	1	18	—	84	—	54	—	—	—	1,193	8	1,201
Butchers and meat cutters	1	—	—	—	2	—	1	—	98	2	251	4	36	—	17	—	41	—	25	—	—	—	472	6	478
Butter and cheese makers	—	—	—	—	—	—	—	—	1	—	3	—	—	—	—	—	—	—	1	—	—	—	5	—	5
Cabinet and furniture makers	—	—	—	—	6	—	1	—	93	—	195	2	44	—	11	—	50	—	19	—	—	—	419	2	421
Carpenters	—	—	3	—	29	—	12	—	389	1	1,329	4	130	—	47	—	258	—	171	1	1	—	2,369	6	2,375
Compositors and typesetters	1	—	—	—	—	—	1	—	10	—	37	1	4	—	5	—	2	—	—	—	—	—	60	1	61
Construction and machinery operators	—	—	—	—	1	—	—	—	5	—	24	—	—	—	—	—	1	—	4	—	—	—	35	—	35
Coremakers	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	1	—	—	—	—	—	4	—	4
Dressmakers and seamstresses	—	1	—	—	—	3	—	2	4	211	3	358	—	34	—	7	1	32	1	30	—	2	9	680	689
Electricians and wiremen	7	—	2	—	16	—	9	—	273	—	838	3	69	—	26	—	98	—	96	1	—	—	1,434	4	1,438
Electroplaters	—	—	—	—	—	—	—	—	5	—	15	—	—	—	—	—	1	—	1	—	—	—	22	—	22
Furriers	—	—	—	—	—	1	—	—	65	2	65	9	6	1	—	—	1	1	5	1	—	—	142	15	157
Glove makers	1	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	3
Jewellers and watchmakers	1	—	—	—	2	—	—	—	64	2	103	6	14	—	3	—	9	—	13	—	—	—	209	8	217
Leather cutters	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	2	2
Machine operators	2	—	1	—	4	—	1	—	101	16	310	48	34	5	4	—	41	2	24	1	—	—	522	72	594
Machinists	3	—	—	—	12	—	3	—	247	3	739	32	70	2	18	—	87	1	69	2	—	—	1,248	40	1,288
Mechanics and repairmen	4	—	—	—	11	—	1	—	483	—	858	2	99	—	24	—	140	—	91	—	1	—	1,712	2	1,714
Metal fitters and assemblers	—	—	—	—	13	—	2	—	235	1	858	9	75	—	26	—	90	—	64	1	—	—	1,363	11	1,374
Milliners	—	—	—	—	—	—	—	—	2	1	—	13	—	—	—	1	—	1	—	1	—	—	2	17	19
Millwrights	—	—	—	—	—	—	—	—	5	—	11	—	1	—	—	—	3	—	1	—	—	—	21	—	21
Moulders	—	—	—	—	2	—	—	—	23	—	108	1	8	—	2	—	5	—	5	—	—	—	153	1	154
Painters, decorators, glaziers	1	—	—	—	7	1	—	—	154	2	533	5	39	—	17	—	74	—	58	—	—	—	883	8	891
Patternmakers	—	—	—	—	1	—	—	—	19	1	43	—	1	—	1	—	2	—	3	—	—	—	70	1	71
Photo-engravers and lithographers	—	—	—	—	—	—	1	—	7	—	17	—	1	—	1	—	1	—	2	—	—	—	30	—	30
Plasterers and lathers	—	—	—	—	1	—	1	—	23	—	122	2	6	—	2	—	8	—	6	—	—	—	169	2	171
Plumbers and pipe fitters	2	—	1	—	12	—	1	—	88	—	311	1	27	—	17	—	49	—	37	—	—	—	545	1	546
Printing and pressmen and plate printers	—	—	—	—	2	—	2	—	28	2	77	6	8	—	—	1	11	—	15	—	—	—	143	9	152

Radio repairmen	2	—	—	—	6	—	2	—	68	—	190	3	8	—	—	—	19	1	14	—	—	—	309	4	313
Sawyers (wood)	—	—	—	—	—	—	—	—	9	—	15	—	1	—	—	—	3	—	17	—	—	—	45	—	45
Sheet metal workers and tinsmiths	1	—	—	—	6	—	3	—	54	—	188	—	7	—	3	—	13	—	7	—	—	—	282	—	282
Shoemakers and shoe repairers	—	—	—	—	1	—	2	—	96	2	167	1	26	—	8	—	15	—	26	1	—	—	341	4	345
Spinners and weavers	—	—	—	—	2	—	—	—	22	8	64	34	3	3	1	—	3	4	5	3	—	—	100	52	152
Stationary engineers	—	—	—	—	1	—	—	—	9	—	34	1	—	—	—	—	13	—	7	—	—	—	64	1	65
Stonecutters and dressers	—	—	—	—	—	—	—	—	—	—	11	—	2	—	—	—	—	—	1	—	—	—	14	—	14
Tailors	—	1	—	—	4	1	1	1	213	34	361	91	40	4	5	2	13	5	19	4	—	—	656	143	799
Tanners	—	—	—	—	—	—	—	—	4	—	11	1	3	—	—	—	2	—	1	—	—	—	21	1	22
Toolmakers, diemakers and setters	4	—	—	—	5	—	2	—	178	—	570	2	20	—	2	—	28	—	26	—	—	—	835	2	837
Upholsterers	—	—	—	—	1	—	—	—	35	—	102	3	13	—	5	—	11	—	10	1	—	—	177	4	181
Welders and flame cutters	—	—	—	—	9	—	3	—	80	—	313	1	23	—	9	—	51	—	44	—	1	—	533	1	534
Workers in pulp, paper and paper products	—	—	—	—	1	—	—	—	7	—	11	—	2	—	—	—	—	1	10	2	—	—	31	3	34
Other workers in food products	—	—	—	—	—	2	—	—	30	4	67	5	12	—	5	—	10	—	9	1	—	—	133	12	145
Other workers in rubber products	2	—	—	—	—	—	—	—	3	—	13	1	1	—	—	—	—	—	—	—	—	—	19	1	20
Other workers in leather and leather products	2	1	—	—	—	—	—	—	15	1	19	3	1	1	—	—	—	—	2	1	—	—	39	7	46
Other workers in textiles	—	—	—	—	—	—	1	—	70	21	140	76	11	2	—	1	8	1	3	3	—	—	233	104	337
Other workers in clothing and textile goods	—	—	—	—	1	—	—	2	28	20	52	73	2	4	1	3	4	6	5	1	—	—	93	109	202
Other workers in wood products	1	—	—	—	1	—	—	—	26	1	73	4	4	—	—	—	2	—	28	1	—	—	135	6	141
Other workers in printing and publishing	—	—	—	—	1	—	—	—	14	6	54	26	2	—	2	1	1	1	3	1	—	—	77	35	112
Other metal workers	1	—	—	—	8	—	—	—	75	—	289	3	21	1	6	—	25	—	21	—	1	—	447	4	451
Other workers in non-metallic mineral products	—	—	—	—	—	—	—	—	12	—	28	3	—	—	1	—	5	—	4	—	—	—	50	3	53
Other manufacturing and mechanical workers	14	—	2	—	29	2	12	3	452	92	1,524	335	57	14	28	6	177	22	162	30	1	—	2,458	504	2,962
Other construction workers	—	—	—	—	5	—	3	—	117	—	477	—	120	—	4	—	36	—	45	—	—	—	807	—	807
Totals, Manufacturing, etc.	**64**	**3**	**10**	—	**250**	**11**	**79**	**8**	**4,879**	**436**	**14,282**	**1,201**	**1,354**	**76**	**397**	**22**	**1,806**	**80**	**1,436**	**89**	**7**	**2**	**24,564**	**1,928**	**26,492**
Labourers (other than agricultural, fishing, logging and mining)	**9**	—	**3**	—	**81**	—	**32**	—	**2,029**	**8**	**5,781**	—	**624**	**5**	**170**	**4**	**796**	**2**	**824**	**5**	**7**	—	**10,356**	**24**	**10,380**
Not stated and unknown	**1**	**1**	**1**	—	**23**	**3**	**4**	**1**	**113**	**42**	**468**	**143**	**23**	**12**	**8**	**4**	**33**	**17**	**52**	**17**	—	—	**726**	**240**	**966**
Totals, Workers	**197**	**78**	**119**	**15**	**923**	**199**	**410**	**162**	**14,389**	**6,617**	**36,395**	**11,053**	**3,662**	**874**	**1,564**	**352**	**6,200**	**1,582**	**4,933**	**1,365**	**31**	**13**	**68,823**	**22,310**	**91,133**
Dependants—																									
Wives	—	95	—	42	—	442	—	201	—	5,608	—	17,344	—	1,408	—	730	—	2,785	—	2,672	—	16	—	31,343	31,343
Children	56	60	37	30	284	261	153	117	3,573	3,232	11,760	10,929	1,021	1,024	538	461	2,232	2,011	1,844	1,617	4	9	21,502	19,751	41,253
Others	8	8	6	12	34	63	17	20	204	671	507	2,132	27	175	42	103	67	350	185	502	—	6	1,097	4,042	5,139
Totals, Dependants	**64**	**163**	**43**	**84**	**318**	**766**	**170**	**338**	**3,777**	**9,511**	**12,267**	**30,405**	**1,048**	**2,607**	**580**	**1,294**	**2,299**	**5,146**	**2,029**	**4,791**	**4**	**31**	**22,599**	**55,136**	**77,735**
Totals, Immigration	**261**	**241**	**162**	**99**	**1,241**	**965**	**580**	**500**	**18,166**	**16,128**	**48,662**	**41,458**	**4,710**	**3,481**	**2,144**	**1,646**	**8,499**	**6,728**	**6,962**	**6,156**	**35**	**44**	**91,422**	**77,446**	**168,868**

Deportations.—The Immigration Act provides for the deportation of persons seeking admission who are unable to comply with existing requirements. Provision is also made under the Act for the deportation of persons in Canada who become undesirable.

9.—Admissions Refused and Deportations, by Cause and Nationality, 1951-53

NOTE.—Figures for 1903-39 are given in the corresponding table of previous Year Books; those for 1940-49 are given in the 1951 edition, p. 150; those for 1950 in the 1954 edition, p. 166.

Cause and Nationality	Refused Admission			Cause and Nationality	Deportations After Admission[1]		
	1951	1952	1953		1951	1952	1953
	No.	No.	No.		No.	No.	No.
From Overseas—				CAUSE			
CAUSE				Mental and medical	40	54	85
Mental and medical	15	36	39	Public charges	14	23	14
Civil	269	478	398	Criminality	85	102	121
				Misrepresentation and stealth	286	330	309
				Other causes	36	70	66
				Accompanying deported persons	—	1	11
NATIONALITY							
British	103	134	133	NATIONALITY			
Other	181	380	304	British	190	215	237
Totals from Overseas	**284**	**514**	**437**	United States	70	82	92
From United States	**4,829**	**3,600**	**2,013**	Other	201	283	277
Grand Totals, Refusals	**5,113**	**4,114**	**2,450**	**Grand Totals, Deportations**	**461**	**580**	**606**

[1] Includes deserting seamen deported.

Returning Canadians.—The numbers of Canadians who returned to Canada during the years 1947 to 1953 after having resided in the United States were as follows: 1947, 8,970; 1948, 5,678; 1949, 4,050; 1950, 3,518; 1951, 3,635; 1952, 4,707; and 1953, 4,606.

Section 2.—Emigration

Emigration from Canada is an important factor tending to offset to some extent both present and past immigration activities. The movement to the United States of native-born Canadians as well as of Europeans who originally migrated to Canada attained considerable proportions at certain periods. The figures of Table **10**, showing the numbers of persons entering the United States from Canada during the years 1944-53, were obtained from the Immigration and Naturalization Service of the United States Department of Justice. No Canadian statistics on emigration are available.

10.—Persons Entering the United States from Canada, Years Ended June 30, 1944-53

Year	Immigrant Aliens from Canada	U.S. Citizens Returning from Canada	Persons Deported from Canada	Total
	No.	No.	No.	No.
1944	9,821	4,743	69	14,633
1945	11,079	5,138	188	16,405
1946	20,434	6,769	414	27,617
1947	23,467	5,003	589	29,059
1948	24,788	4,946	512	30,246
1949[1]	25,156	5,787	425	31,368
1950	21,885	3,859	476	26,220
1951	25,880	4,303	315	30,498
1952	33,354	4,012	343	37,709
1953	36,283	2,846	351	39,480

[1] Newfoundland included from 1949.

PART II.—CANADIAN CITIZENSHIP*

An outline of early naturalization procedure and events leading to the passing of the Canadian Citizenship Act is given in the 1951 Year Book, pp. 153-155.

Section 1.—The Canadian Citizenship Act

The Canadian Citizenship Act came into force on Jan. 1, 1947, its purpose being to give a clear definition of Canadian citizenship and to provide an underlying community of status for all the people of Canada, helping to bind them together as Canadians. Since Jan. 18, 1950, the administration of Canadian citizenship has been the responsibility of the Department of Citizenship and Immigration. The provisions of the Act with the changes occasioned by the 1953 amendments are outlined in the following paragraphs.

Natural-Born Canadian Citizens.—The Act defines the status of natural-born Canadians before and after the coming into force of the Act, including persons born in and outside of Canada and those born on a Canadian ship or aircraft. A person born outside of Canada out of wedlock is a Canadian citizen if his mother was born in Canada, or on a Canadian ship or aircraft, or was a British subject with Canadian domicile, and had not become an alien. A person born outside of Canada of a Canadian parent before Jan. 1, 1947, is not a Canadian citizen unless, at the commencement of the Act, he had been admitted to Canada for permanent residence, or was a minor. If he were born on or after Jan. 1, 1947, he is not a Canadian citizen unless, within a two-year period following his birth, or within such extended period as may be authorized in special cases by the Minister of Citizenship and Immigration, his birth is registered with an official Canadian representative abroad, or with the Minister. In addition, a person who is a Canadian citizen born abroad ceases to be a Canadian citizen upon the date of the expiration of three years after the day on which he attains the age of 21 years, unless he has his place of domicile in Canada on such date or has, before such date and after attaining the age of 21 years, filed, in accordance with the regulations, a declaration of retention of Canadian citizenship. A Canadian citizen, whether he is abroad or at home, may obtain a certificate of proof of his Canadian citizenship upon payment of a fee of $1.

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* Prepared in the Canadian Citizenship Branch under the direction of Laval Fortier, Deputy Minister, Department of Citizenship and Immigration, Ottawa.

British Subjects, Commonwealth Citizens, Citizens of the Republic of Ireland and Canadian Citizens.—The Citizenship Act states that a Canadian citizen is a British subject. Before the passage of the Act, he could not, officially, describe himself as a Canadian citizen because the official designation for a Commonwealth citizen was *British Subject.* Now, he may officially call himself a *Canadian.* The authority for this procedure is found in Sect. 3 of the Act, which reads:—

> "Where a person is required to state or declare his national status, any person who is a Canadian citizen under this Act shall state or declare himself to be a Canadian citizen and his statement or declaration to that effect shall be a good and sufficient compliance with such requirement."

Non-Canadian British subjects continue to have the right to vote in federal, provincial and municipal elections, but they are not Canadian citizens until they have lived five years in Canada. Those who had that residence (Canadian domicile) on Jan. 1, 1947, are Canadian citizens, and those who attain it after that date must apply for certificates of citizenship before being granted the status of Canadian citizens. Citizens of the Republic of Ireland, who are not British subjects, have the same rights, in Canada, as a British subject.

Canadian Citizens other than Natural-Born.—Under the Act, persons naturalized in Canada before Jan. 1, 1947, and British subjects who had Canadian domicile at the commencement of the Act are Canadian citizens. The Act also defines the status as Canadian citizens of women and children, other than natural-born, and the manner in which they would have acquired Canadian citizenship.

Reinstatement of Persons of Canadian Origin Naturalized Outside of Canada.—By the amendment of July 20, 1950, the Minister may, in his discretion, grant a certificate of citizenship to a person who was a natural-born Canadian, or who was a British subject of Canadian origin, and who lost such status by naturalization outside of Canada or for any reason other than marriage. The qualifications include continuous residence in Canada for a period of one year immediately preceding the date of the application as well as certain other requirements.

Status and Procedure of Non-Canadians to Canadian Citizenship.—Any person who is not a Canadian citizen or is not otherwise a British subject may file his application for citizenship with the court of the county or district in which he resides if he has met the following requirements:—

(1) He must have acquired Canadian domicile as defined in the Immigration Act, which states in part, "Canadian domicile is required for the purposes of this Act by a person having his place of domicile for at least five years in Canada after having been landed in Canada". There are three important exceptions to the requirements of Canadian domicile [Sect. 10 (1) (c) of the Canadian Citizenship Act]: (*a*) under certain circumstances, a person who has served outside of Canada in the Canadian Armed Forces; (*b*) the wife of a Canadian citizen, provided she has been legally admitted to Canada for permanent residence; and (*c*) a person who had a place of domicile in Canada for 20 years immediately before the first of January 1947 and was not under an order of deportation on that date.

(2) He must have lived in Canada for at least a year *immediately* before the date of his application.

(3) He must be of good character.

(4) He must have an adequate knowledge of the English or French language. There is one exception to this requirement: a person who has lived in Canada for 20 years or more is *not* required to have a knowledge of either language.

(5) He must have an adequate knowledge of the responsibilities and privileges of Canadian citizenship.

(6) He must intend to make his permanent home in Canada.

(7) He must be at least 21 years old or the spouse of and reside in Canada with a Canadian citizen.

The filing of a Declaration of Intention is no longer a requirement under the Act. If, however, a person, who has been legally landed, wishes to file such a Declaration he may do so, using the prescribed form. The Declaration may be filed with the clerk of the court of the county or district where the declarant lives; with a citizenship officer, or with the Registrar of Canadian Citizenship, Ottawa. There are no restrictions with respect to age.

When the judge has given his decision, the papers and the decision are forwarded to the Minister of Citizenship and Immigration who may, in his discretion, grant a certificate of citizenship. When a certificate is granted, it is forwarded to the clerk of the court, who then notifies the applicant to appear in court for the purpose of taking the Oath of Allegiance and Declaration of Renunciation of Foreign Allegiance and receiving his certificate of citizenship.

If the application is rejected by the court or by the Minister, the applicant must wait two years before filing a new application.

Status of Married Women.—A Canadian woman does not lose Canadian citizenship upon marriage to an alien, and a non-Canadian woman does not become a Canadian citizen upon marriage to a Canadian citizen. In the former case, she may file with the Minister a Declaration of Renunciation of Canadian Citizenship if she has acquired her husband's nationality, and she thereupon ceases to be a Canadian citizen. In the latter case, a non-Canadian woman must apply to the court for a certificate of citizenship. If she is a citizen of another Commonwealth country, she may apply direct to the Minister. The one concession as to qualifications is a residence of only one year in Canada.

A woman of Canadian origin who ceased to be a British subject by reason only of her marriage to an alien prior to Jan. 1, 1947, may regain her status and be granted a certificate of citizenship upon application direct to the Department of Citizenship and Immigration. She need not be a resident of Canada and no special qualifications are required.

Status of Minors, Foundlings, Posthumous Births, etc.—The Minister may, in his discretion, grant a certificate of citizenship to a minor child of a person who is a Canadian citizen, other than a natural-born Canadian citizen, on the application of the said person, provided he or she is the responsible parent of the child and further provided that the child has been lawfully admitted to Canada for permanent residence and, if 14 years of age or more, has an adequate knowledge of the English or the French language.

The Minister may also grant a certificate to a minor in any special case whether or not the conditions required by the Act have been complied with. Every foundling, who is or was first found as a deserted infant in Canada, shall, until the contrary is proved, be deemed to have been born in Canada. Where a child is born after the death of his father, the child shall, for the purposes of definition of natural-born Canadian citizens, be deemed to have been born immediately before the death of the father.

Children of Diplomatic Representatives in Canada.—The amendment of July 20, 1950 (effective Jan. 1, 1947), excludes from the status of natural-born Canadian citizens the children born in Canada of parents who, at the time of the birth, are the diplomatic or consular representatives of foreign countries in Canada, or who are employees in the service of such representatives and citizens of the countries represented.

Adopted or Legitimated Persons.—Effective July 20, 1950, the Act provides that certificates of Canadian citizenship may be granted to adopted or legitimated persons who have been admitted to Canada for permanent residence if the adopter, or the legally recognized father, is a Canadian citizen.

Certificate in Case of Doubt.—A certificate may be granted for the purpose of removing any doubts as to whether the person to whom it is granted is a Canadian citizen, and it is specifically provided that the granting of the certificate shall not be deemed to establish that the person to whom it is granted was not previously a Canadian citizen.

Protection of Status Prior to the Canadian Citizenship Act.—Sect. 44 of the Act provides that, notwithstanding the repeal of the Naturalization Act and the Canadian Nationals Act, the Canadian Citizenship Act is not to be construed or interpreted as depriving any person who is a Canadian national, a British subject or an alien as defined in the said Acts, or in any other law in force in Canada, of the national status he possessed at the time of the coming into force of this Act.

Loss of Canadian Citizenship.—Canadian citizenship may be lost for the following reasons:—

(1) A Canadian citizen who, when outside of Canada and not under disability (minor, lunatic or idiot), acquires, by a voluntary and formal act other than marriage, the nationality or citizenship of a country other than Canada. This does not apply if that country is at war with Canada at the time of acquisition but, in such a case, the Minister may order that he cease to be a Canadian citizen. The purpose of this is to hold the person, if deemed necessary, to his obligations as a Canadian.

(2) A Canadian citizen who, under the law of another country, is a national or citizen of such country and who serves in the armed forces of such country when it is at war with Canada. This does not apply if the Canadian citizen became a national or citizen of such country when it was at war with Canada.

(3) A Canadian citizen who, when in Canada, acquires voluntarily the citizenship of a foreign country (other than by marriage) may be deprived of his Canadian citizenship by Order of the Governor in Council, on recommendation of the Minister.

(4) A Canadian citizen, other than natural-born or one who has served in the Armed Forces of Canada in time of war, who resides outside of Canada for ten consecutive years without maintaining substantial connection with Canada, loses his citizenship automatically, but the period of absence may, upon application, be extended beyond the ten years for good and sufficient cause.

Loss of Citizenship by Revocation—Applicable Only to Naturalized Persons.—The citizenship of a Canadian citizen, other than a natural-born Canadian citizen, may be revoked by the Governor in Council for such reasons as trading or communicating with an enemy country during time of war; disaffection or disloyalty while out of Canada or who, while in Canada, has, by a court of competent jurisdiction, been convicted of any offence involving disaffection or disloyalty; obtaining a certificate of naturalization or Canadian citizenship by false representation or fraud; residence outside of Canada for not less than six years (without maintenance of substantial connection) since becoming a Canadian citizen or being naturalized in Canada; residence for not less than two years (without maintenance of substantial connection) in a *foreign* country of which he was a national or citizen at any time prior to his becoming a Canadian citizen or being naturalized in Canada.

Loss of Citizenship by Revocation—Applicable to Both Natural-Born and Naturalized Persons.—The Governor in Council may, in his discretion, order that any person shall cease to be a Canadian citizen if, upon a report from the Minister of Citizenship and Immigration, he is satisfied that such person has, when not under a disability, (1) taken or made an oath, affirmation, or other declaration of allegiance to a foreign country, or (2) made a declaration renouncing his Canadian citizenship.

Loss of Citizenship in Relation to Women.—In the case of marriage, a woman who is a Canadian citizen does not lose the status of a Canadian citizen unless, having on marriage acquired her husband's nationality, she makes a declaration renouncing her Canadian citizenship.*

Section 2.—Canadian Citizenship Statistics

Citizenship of the Total Population.—Results of the 1951 Census show that 96·9 p.c. of all the people in Canada were Canadian citizens, that 0·7 p.c. were citizens of other Commonwealth countries, 1·7 p.c. of European countries, 0·1 p.c. of Asiatic countries, 0·5 p.c. of the United States and 0·1 p.c. of other countries. Table **1** shows the 1951 population classified by country of allegiance and origin. According to this table, 98·0 p.c. of the persons of British Isles origins and 99·7 p.c. of those of French origin owed allegiance to Canada. Corresponding percentages for other European and Asiatic origins were 89·3 p.c. and 78·7 p.c., respectively.

1.—Population Classified by Country of Allegiance and Origin, 1951

Origin	Country of Allegiance					Total
	Canada	Other Common-wealth Countries	United States	European Countries	Other Countries[1]	
	No.	No.	No.	No.	No.	No.
British Isles[2]	6,577,849	95,567	34,229	1,524	516	6,709,685
French	4,304,972	763	8,370	4,896	166	4,319,167
Other European	2,279,704	6,609	22,025	229,311	16,073	2,553,722
German	586,597	631	8,203	21,739	2,825	619,995
Italian	126,767	1,640	878	22,712	248	152,245
Jewish	161,968	1,475	2,811	12,305	3,111	181,670
Netherlanders	227,552	312	2,327	33,032	1,044	264,267
Polish	179,960	661	845	36,890	1,489	219,845
Russian	83,643	181	459	6,451	545	91,279
Scandinavian[3]	268,904	311	4,218	9,426	165	283,024
Ukrainian	366,160	225	305	25,069	3,284	395,043
Other	278,153	1,173	1,979	61,687	3,362	346,354
Asiatic	57,325	417	220	104	14,761	72,827
Native Indian and Eskimo	165,359	45	169	17	17	165,607
Other and not stated	182,730	670	3,987	638	396	188,421
Totals, All Origins	**13,567,939**	**104,071**	**69,000**	**236,490**	**31,929**	**14,009,429**

[1] Includes persons reported as "stateless". [2] Includes English, Irish, Scottish, Welsh and Manx. [3] Includes Danish, Icelandic, Norwegian and Swedish.

Citizenship Certificates Issued.—In 1953, 22,593 Canadian Citizenship Certificates were issued, 22,102 in English and 491 in French. Corresponding figures for 1952 were 20,506 certificates, 20,135 in English and 371 in French.

During 1953, the Canadian Citizenship Registration Branch recorded 2,402 certificates of registration of births abroad, 24,757 declarations of intention filed with the courts, 141 declarations of retention of citizenship and 44 declarations of resumption of Canadian citizenship. Certificates issued free to persons who had had active military service numbered 672. Corresponding figures for 1951 were 1,563 registrations of births abroad, 13,323 declarations of intention, 143 declarations of retention of citizenship, 76 declarations of resumption of citizenship and 1,646 certificates issued free to persons who had had active military service.

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* The foreign countries, under the laws of which a woman does not acquire the citizenship of such countries on marriage, are: Argentina, Brazil, Chile, Colombia, Ecuador, Guatemala, Morocco, Israel, Panama, Paraguay and Uruguay.

2.—Citizenship Certificates Issued, by Status of Recipient, 1951-53

Under 1947 Act	Classification	1951	1952	1953
		No.	No.	No.
Sect. 34 (1) (i)	Certificates of Proof of Status—			
	Canadian citizens by birth	1,771	2,630	2,078
	By naturalization under former Acts	3,643	3,420	3,826
	British subjects with 5 years domicile before Jan. 1, 1947	1,647	2,208	1,339
	Women, through marriage	1,317	1,495	1,806
Sect. 10 (2)	British subjects with 5 years domicile after Jan. 1, 1947	841	1,941	3,113
Sect. 10 (1)	Aliens	9,359	6,275	8,277
Sect. 10 (5)	Minors whose parents have been granted Certificates	1,067	1,614	1,231
Sect. 11 (3)	Minors under special circumstances	39	37	77
Sect. 10 (3)	Women who regained lost Canadian citizenship through marriage	1,006	678	668
Sect. 10 (4)	Canadians who regained lost status by naturalization outside Canada	227	177	135
Sect. 11 (1)	Doubtful cases who have been now awarded Certificates	6	4	16
Sect. 11 (2)	Adopted and legitimated persons	14	27	27
	Totals	**20,937**	**20,506**	**22,593**

Characteristics of Persons Granted Citizenship in 1953.—Detailed statistics showing the characteristics of aliens* (non-British subjects) granted citizenship certificates became available for the first time in 1952; such characteristics included age, marital status, occupation, period of immigration, residence, as well as previous nationality. The characteristics of British subjects granted certificates were also recorded and certain of these are shown separately for 1953 in Tables **3** to **7**.

Of the total non-British subjects granted citizenship in 1953, 47·3 p.c. had immigrated to Canada after the end of World War II and 40 p.c. had immigrated before 1931. Regionally, these new Canadians were distributed as follows: 1·9 p.c. in the Atlantic Provinces, 16·9 p.c. in Quebec, 44·6 p.c. in Ontario, 20·3 p.c. in the Prairie Provinces and 16·2 p.c. in British Columbia. Just over 82 p.c. of them resided in urban centres as compared with 62 p.c. of the total population at the date of the 1951 Census.

More than 60 p.c. of the non-British subjects naturalized in 1953 were males. Young persons under 20 years of age constituted 7 p.c. of the total, 48 p.c. were 20 to 44 years of age, 37 p.c. were 45 to 65 years of age and 8 p.c. were over 65. Almost one-quarter of them formerly owed allegiance to Poland and about two-thirds of these persons were males, the majority of whom were recent arrivals in Canada. The next largest group formerly owed allegiance to China, and most of that group had been in Canada for many years.

About 19 p.c. of the males were employed in manufacturing occupations, 12 p.c. in service fields, 11 p.c. in agriculture, 11 p.c. in labouring occupations and 10 p.c. in proprietary and managerial occupations. About 73 p.c. of the females were homemakers.

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* Includes all aliens granted Certificates in 1953. In addition to those classified under Sect. 10 (1) of the Citizenship Act 1947, as shown in Table 2, they include the totals shown in Sects. 10 (3) and 10 (4), and a number of those in Sects. 10 (5), 11 (2) and 11 (3).

3.—Persons Granted Citizenship Certificates in 1953, classified by Period of Immigration to Canada and by Province of Residence

Residence	Total British Subjects	Non-British Subjects						
		Period of immigration					Born in Canada[1]	Total
		Before 1921	1921–1930	1931–1940	1941–1950	1951–1953		
	No.	No.	No.	No.	No.	No.	No.	No.
Residing in Canada—								
Newfoundland	10	—	4	6	3	1	1	15
Prince Edward Island	11	1	3	2	3	2	1	12
Nova Scotia	71	23	13	6	53	22	5	122
New Brunswick	45	7	6	5	19	3	1	41
Quebec	483	284	438	134	673	80	93	1,702
Ontario	1,853	454	769	299	2,532	315	128	4,497
Manitoba	81	130	199	41	157	18	46	591
Saskatchewan	41	165	189	29	89	61	19	552
Alberta	151	176	294	88	206	86	57	907
British Columbia	695	586	305	75	371	215	84	1,636
Yukon and Northwest Territories	10	—	9	3	2	—	—	14
Totals, Residing in Canada	3,451	1,826	2,229	688	4,108	803	435	10,089
Residing Outside of Canada	3	—	—	—	1	1	17	19
Totals, Persons Naturalized	**3,454**	**1,826**	**2,229**	**688**	**4,109**	**804**	**452**	**10,108**

[1] Canadian-born who lost their citizenship by marriage; this applies to females only.

4.—Persons Granted Citizenship Certificates in 1953, by Sex and Age Group

Age Group	British Subjects		Non-British Subjects		Age Group	British Subjects		Non-British Subjects	
	Males	Females	Males	Females		Males	Females	Males	Females
Years	No.	No.	No.	No.	Years	No.	No.	No.	No.
0– 4	5	3	24	11	45–49	126	146	660	523
5– 9	67	58	47	29	50–54	79	98	610	441
10–14	49	43	77	41	55–59	54	55	508	282
15–19	44	44	415	121	60–64	38	48	495	204
20–24	87	97	446	229	65–69	21	32	352	123
25–29	307	357	600	374	70–74	6	12	174	52
30–34	437	300	715	412	75+	4	4	52	23
35–39	248	212	503	422					
40–44	202	171	680	463	**Totals, All Ages**	**1,774**	**1,680**	**6,358**	**3,750**

5.—Persons Granted Citizenship Certificates in 1953, by Sex and Occupation

Occupation	British Subjects		Non-British Subjects	
	Males	Females	Males	Females
	No.	No.	No.	No.
Proprietary and managerial	169	10	623	21
Professional	359	81	382	120
Clerical	128	210	146	157
Transportation and communication	135	3	164	5
Commercial and financial	144	28	202	32
Service	150	75	788	176
Agricultural	27	—	719	12
Fishing, trapping, logging	8	—	50	—
Mining	6	—	94	—
Manufacturing and mechanical	289	50	1,179	184
Construction	86	—	359	1
Labourers, not in primary industries	18	—	702	3
Homemakers	—	1,041	—	2,743
No occupation (including students, retired, etc.)	64	36	191	86
Children under 14	112	98	127	71
Not stated[1]	79	48	632	139
Totals, All Occupations	**1,774**	**1,680**	**6,358**	**3,750**

[1] Mainly children over 14 years of age.

6.—Persons Granted Citizenship Certificates in 1953, by Sex and Country of Birth

Country of Birth	British Subjects			Non-British Subjects		
	Males	Females	Total	Males	Females	Total
	No.	No.	No.	No.	No.	No.
Canada	—	1	1	61	575	636
British Isles	1,469	1,218	2,687	9	27	36
United States	12	20	32	278	123	401
Austria	22	18	40	113	100	213
Belgium	3	12	15	83	71	154
Bulgaria	—	—	—	10	5	15
Czechoslovakia	8	5	13	218	211	429
Denmark	—	2	2	56	40	96
Estonia	2	2	4	42	52	94
Finland	—	3	3	80	84	164
France	3	15	18	41	48	89
Germany	12	26	38	138	142	280
Greece	1	5	6	96	65	161
Hungary	—	1	1	170	160	330
Italy	2	28	30	117	124	241
Latvia	—	3	3	93	44	137
Lithuania	—	1	1	153	60	213
Netherlands	3	43	46	180	130	310
Norway	4	1	5	81	44	125
Poland	8	20	28	1,790	745	2,535
Roumania	—	9	9	141	110	251
Sweden	—	3	3	55	21	76
Switzerland	2	3	5	62	31	93
U.S.S.R.	4	9	13	237	270	507
Yugoslavia	—	4	4	147	120	267
Other European countries	15	10	25	15	15	30
China	11	36	47	1,778	235	2,013
India	57	70	127	—	—	—
Japan	2	2	4	76	63	139
Other Asiatic countries	24	12	36	26	22	48
Africa	14	10	24	4	2	6
Australia	14	12	26	—	—	—
New Zealand	14	10	24	—	1	1
South America	16	13	29	1	3	4
West Indies	49	47	96	2	2	4
Other countries	3	6	9	4	5	9
At sea	—	—	—	1	—	1
Totals, All Countries	**1,774**	**1,680**	**3,454**	**6,358**	**3,750**	**10,108**

7.—Persons Granted Citizenship Certificates in 1953, by Country of Former Allegiance

Country of Former Allegiance	No.	Country of Former Allegiance	No.	Country of Former Allegiance	No.
British countries	3,454	Germany	371	Peru	1
		Greece	181	Poland	2,328
Albania	8	Haiti	2	Portugal	2
Austria	191	Hungary	294	Roumania	237
Belgium	158	Iceland	3	Spain	7
Bolivia	1	Israel	16	Sweden	101
Brazil	1	Italy	317	Switzerland	122
Bulgaria	15	Japan	155	Syria	10
China	2,044	Latvia	138	Turkey	8
Cuba	1	Lebanon	8	United States	640
Czechoslovakia	424	Liechtenstein	1	U.S.S.R.	328
Danzig	1	Lithuania	199	Yugoslavia	245
Denmark	132	Mexico	1	Stateless	524
Estonia	98	Netherlands	356	Unknown	7
Finland	165	Norway	163		
France	89	Palestine	15	**All Countries**	**13,562**

CHAPTER V.—VITAL STATISTICS*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

This Chapter of the Year Book is intended to provide a broad summary of the main trends in the registration of births, marriages, and deaths in Canada during the past 30 years, to compare the principal Canadian vital statistics rates or indices with those for other countries and to provide lay readers and students of demography, public health, sociology and other related fields with basic Canadian vital statistics data. Detailed data are available from regular DBS annual reports, notably *Vital Statistics* (Preliminary Report) and *Vital Statistics of Canada.* Certain unpublished data are also available on request. The history of the collection of vital statistics in Canada is covered in the 1948-49 edition of the Year Book, pp. 185-188.

Births and deaths are classified by place of residence (births are classified according to the residence of the mother) and marriages by place of occurrence.

The population data upon which the rates shown in this Chapter are computed are contained in Chapter III (Population) and in the several DBS reports relating to census and intercensal estimates of population.

In comparing the birth, death and marriage rates by provinces, it is important to bear in mind that part of the differences observed may be caused by differences in the sex and age distribution of their populations. Similarly, changes in these rates may be owing partly to changes in this distribution. These remarks apply also to international comparisons of birth, death and marriage rates.

Section 1.—Summary of Vital Statistics

Table 1 gives a summary of the principal vital statistics of the provinces of Canada from 1921 when the system of collection of national statistics was initiated and Table 2 shows certain vital statistics for urban centres having at least 10,000 population at the date of the 1951 Census.

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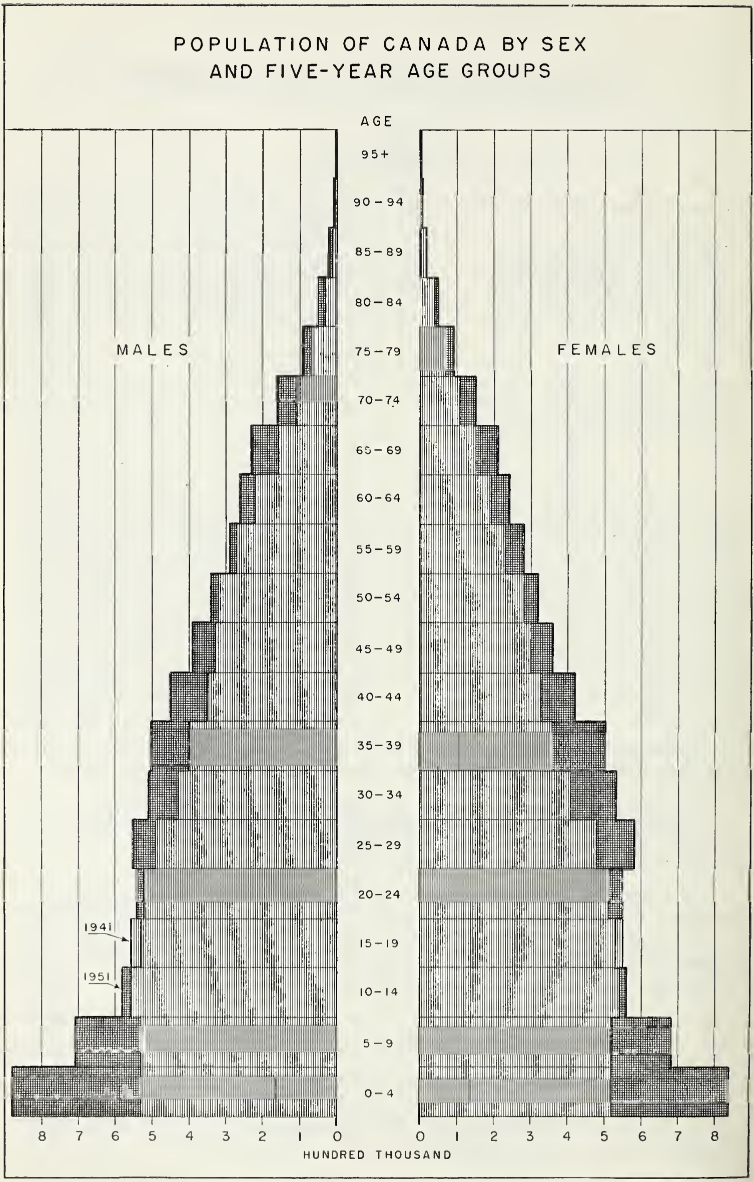
* Revised in the Vital Statistics Section, Health and Welfare Division, Dominion Bureau of Statistics.



This Chart shows the age–sex distribution of the population at the 1941 and 1951 Censuses, as an illustration of how that distribution may change within a short period of time. Such changes can have a very significant effect on vital statistics rates.

1.—Summary of Principal Vital Statistics, by Province, 1921-52

(Exclusive of the Territories)

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality[1]		Maternal Mortality		Marriages	
	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[3]	No.	Rate[3]	No.	Rate[2]
Newfoundland—												
Av. 1921-25......	6,986	26·7	3,665	14·0	3,321	12·7	..	..	50	7·1	1,481	5·7
" 1926-30......	6,756	25·1	3,684	13·7	3,072	11·4	779	115	33	4·9	1,632	6·1
" 1931-35......	6,686	23·4	3,642	12·8	3,044	10·6	782	117	34	5·0	1,708	6·0
" 1936-40......	7,638	25·8	3,681	12·4	3,957	13·4	754	99	40	5·3	2,208	7·5
" 1941-45......	9,292	29·8	3,681	11·8	5,611	18·0	852	92	39	4·2	2,967	9·5
" 1946-50......	12,352	36·2	3,179	9·3	9,173	26·9	754	61	25	2·0	2,711	8·0
1946..............	12,033	36·5	3,427	10·4	8,606	26·1	887	74	27	2·2	3,067	9·3
1947..............	12,646	37·5	3,325	9·9	9,321	27·6	790	62	29	2·3	2,917	8·7
1948..............	11,634	33·8	3,108	9·0	8,526	24·8	685	59	22	1·9	2,610	7·6
1949..............	12,281	35·6	2,868	8·3	9,413	27·3	651	53	24	2·0	2,445	7·1
1950..............	13,164	37·5	3,168	9·0	9,996	28·5	758	58	21	1·6	2,515	7·2
1951..............	11,738	32·5	3,004	8·3	8,734	24·2	637	54	25	2·1	2,517	7·0
1952..............	12,561	33·6	2,773	7·4	9,788	26·2	572	46	25	2·0	2,730	7·3
P. E. Island—												
Av. 1921-25......	1,965	22·6	1,085	12·5	880	10·1	152	77	9	4·6	473	5·4
" 1926-30......	1,735	19·7	969	11·0	766	8·7	122	70	8	4·6	473	5·4
" 1931-35......	1,961	21·8	1,001	11·1	960	10·7	131	67	10	5·1	496	5·5
" 1936-40......	2,054	21·9	1,080	11·5	974	10·4	142	69	10	4·9	623	6·6
" 1941-45......	2,180	23·7	964	10·5	1,216	13·2	114	52	9	3·9	686	7·5
" 1946-50......	2,869	30·5	922	9·8	1,947	20·7	114	40	4	1·3	677	7·2
1946..............	2,793	29·7	874	9·3	1,919	20·4	97	35	6	2·1	837	8·9
1947..............	2,992	31·8	1,020	10·9	1,972	20·9	135	45	6	2·0	676	7·2
1948..............	2,842	30·6	887	9·5	1,955	21·1	97	34	3	1·1	635	6·8
1949..............	2,831	30·1	924	9·8	1,907	20·3	135	48	1	0·4	619	6·6
1950..............	2,885	30·1	903	9·4	1,982	20·7	105	36	3	1·0	616	6·4
1951..............	2,651	27·1	904	9·2	1,747	17·9	90	34	1	0·4	583	5·9
1952..............	2,703	26·2	916	8·9	1,787	17·3	83	31	4	1·5	613	6·0
Nova Scotia—												
Av. 1921-25......	12,119	23·4	6,519	12·6	5,600	10·8	1,139	94	70	5·8	3,186	6·1
" 1926-30......	11,016	21·4	6,362	12·4	4,653	9·0	934	85	61	5·5	3,224	6·3
" 1931-35......	11,486	21·9	6,073	11·6	5,414	10·3	840	73	59	5·1	3,522	6·7
" 1936-40......	12,060	21·7	6,126	11·0	5,934	10·7	782	65	48	4·0	4,796	8·6
" 1941-45......	15,146	25·2	6,326	10·5	8,820	14·7	870	57	41	2·7	6,302	10·5
" 1946-50......	17,994	28·9	6,042	9·7	11,952	19·2	760	42	22	1·2	5,525	8·9
1946..............	17,914	29·5	6,046	9·9	11,868	19·6	822	46	28	1·6	6,549	10·8
1947..............	19,265	31·3	6,009	9·8	13,256	21·5	840	44	20	1·0	5,861	9·5
1948..............	17,791	28·5	6,097	9·8	11,694	18·7	695	39	19	1·1	5,093	8·1
1949..............	17,739	28·2	5,980	9·5	11,759	18·7	750	42	20	1·1	5,058	8·0
1950..............	17,262	27·1	6,078	9·5	11,184	17·6	693	40	21	1·2	5,065	7·9
1951..............	17,125	26·6	5,812	9·0	11,313	17·6	594	35	12	0·7	5,094	7·9
1952..............	17,951	27·5	5,756	8·8	12,195	18·7	615	34	14	0·8	5,390	8·3
New Brunswick—												
Av. 1921-25......	11,080	28·4	5,093	13·1	5,987	15·4	1,164	105	51	4·6	2,953	7·6
" 1926-30......	10,327	25·8	5,019	12·5	5,308	13·2	1,040	101	64	6·2	2,970	7·4
" 1931-35......	10,440	24·9	4,710	11·3	5,730	13·6	857	82	57	5·5	2,737	6·5
" 1936-40......	11,105	25·1	5,040	11·4	6,065	13·7	913	82	54	4·9	3,801	8·6
" 1941-45......	13,037	28·2	5,050	10·9	7,987	17·3	960	74	42	3·2	4,433	9·6
" 1946-50......	16,878	34·0	4,886	9·8	11,992	24·2	1,015	60	23	1·4	4,864	9·8
1946..............	16,274	34·0	4,866	10·2	11,408	23·8	1,066	66	34	2·1	5,866	12·3
1947..............	17,771	36·4	4,832	9·9	12,939	26·5	1,041	59	25	1·4	5,189	10·6
1948..............	17,279	34·7	4,959	10·0	12,320	24·7	1,047	61	23	1·3	4,640	9·3
1949..............	16,673	32·8	4,876	9·6	11,797	23·2	993	60	18	1·1	4,251	8·4
1950..............	16,393	32·0	4,895	9·6	11,498	22·4	927	57	15	0·9	4,376	8·5
1951..............	16,075	31·2	4,873	9·4	11,202	21·8	835	52	11	0·7	4,386	8·5
1952..............	16,691	31·7	4,647	8·8	12,044	22·9	729	44	19	1·1	4,276	8·1
Quebec—												
Av. 1921-25......	87,032	35·5	33,339	13·6	53,693	21·9	10,834	124	338	3·9	17,529	7·1
" 1926-30......	82,771	30·5	36,645	13·5	46,126	17·0	10,518	127	433	5·2	18,731	6·9
" 1931-35......	78,888	26·6	32,796	11·0	46,092	15·6	7,757	98	405	5·1	17,089	5·8
" 1936-40......	78,509	24·6	33,221	10·4	45,288	14·2	6,470	82	400	5·1	27,111	8·5
" 1941-45......	97,906	28·4	34,273	9·9	63,633	18·5	6,690	68	318	3·2	33,126	9·6
" 1946-50......	115,496	30·4	33,723	8·9	81,773	21·5	6,205	54	227	2·0	34,874	9·2
1946..............	111,285	30·7	33,690	9·3	77,595	21·4	6,110	55	229	2·1	36,650	10·1
1947..............	115,553	31·1	33,708	9·1	81,845	22·0	6,583	57	259	2·2	35,494	9·6
1948..............	114,709	30·3	33,603	8·9	81,106	21·4	6,211	54	232	2·0	34,646	9·1
1949..............	116,824	30·1	34,107	8·8	82,717	21·3	6,031	52	234	2·0	33,485	8·6
1950..............	119,111	30·0	33,507	8·4	85,604	21·6	6,091	51	182	1·5	34,093	8·6
1951..............	120,930	29·8	34,900	8·6	86,030	21·2	5,821	48	180	1·5	35,704	8·8
1952..............	126,416	30·3	34,854	8·4	91,562	21·9	6,332	50	155	1·2	35,374	8·5

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[1] Under one year of age.
[2] Per 1,000 population.
[3] Per 1,000 live births.

1.—Summary of Principal Vital Statistics, by Province, 1921-52—continued

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality[1]		Maternal Mortality		Marriages	
	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[3]	No.	Rate[3]	No.	Rate[2]
Ontario—												
Av. 1921-25......	71,454	23·7	34,252	11·3	37,202	12·3	5,916	83	386	5·4	24,037	8·0
" 1926-30......	68,704	21·0	36,650	11·2	32,054	9·8	5,091	74	398	5·8	25,449	7·8
" 1931-35......	65,000	18·5	35,782	10·2	29,218	8·3	3,962	61	344	5·3	24,260	6·9
" 1936-40......	64,461	17·5	37,794	10·3	26,668	7·2	3,196	50	291	4·5	32,719	8·9
" 1941-45......	77,738	19·9	39,738	10·2	38,000	9·7	3,276	42	197	2·5	38,042	9·7
" 1946-50......	105,161	24·6	42,214	9·9	62,947	14·7	3,795	36	129	1·2	44,084	10·3
1946..............	97,446	23·8	39,758	9·7	57,688	14·1	3,653	37	160	1·6	46,073	11·3
1947..............	108,853	26·1	41,619	10·0	67,234	16·1	3,914	36	129	1·2	44,056	10·5
1948..............	104,195	24·4	42,364	9·9	61,831	14·5	3,684	35	125	1·2	43,242	10·1
1949..............	106,601	24·3	43,379	9·9	63,222	14·4	3,974	37	134	1·3	43,304	9·9
1950..............	108,708	24·3	43,948	9·8	64,760	14·5	3,751	35	97	0·9	43,744	9·8
1951..............	114,827	25·0	43,981	9·6	70,846	15·4	3,545	31	97	0·8	45,198	9·8
1952..............	123,891	26·0	44,402	9·3	79,489	16·7	3,789	31	100	0·8	45,251	9·5
Manitoba—												
Av. 1921-25......	16,590	26·8	5,348	8·6	11,242	18·1	1,394	84	87	5·2	4,634	7·5
" 1926-30......	14,392	21·7	5,507	8·3	8,885	13·4	1,031	72	81	5·6	4,951	7·5
" 1931-35......	13,690	19·4	5,413	7·7	8,277	11·7	835	61	60	4·4	5,015	7·1
" 1936-40......	13,515	18·8	6,136	8·5	7,379	10·3	773	57	54	4·0	6,931	9·6
" 1941-45......	15,831	21·8	6,633	9·1	9,198	12·7	814	51	41	2·6	7,295	10·0
" 1946-50......	19,325	25·9	6,702	9·0	12,623	16·9	810	42	24	1·3	7,605	10·2
1946..............	18,794	25·9	6,537	9·0	12,257	16·9	885	47	32	1·7	8,594	11·8
1947..............	20,409	27·6	6,771	9·2	13,638	18·4	931	46	23	1·1	7,712	10·4
1948..............	18,870	25·3	6,675	8·9	12,195	16·4	765	41	28	1·5	7,325	9·8
1949..............	19,292	25·5	6,919	9·1	12,373	16·4	794	41	25	1·3	7,265	9·6
1950..............	19,261	25·1	6,610	8·6	12,651	16·5	673	35	14	0·7	7,128	9·3
1951..............	19,942	25·7	6,735	8·7	13,207	17·0	658	33	22	1·1	7,366	9·5
1952..............	20,777	26·0	6,552	8·2	14,225	17·8	647	31	11	0·5	7,128	8·9
Saskatchewan—												
Av. 1921-25......	21,580	27·7	5,859	7·5	15,721	20·2	1,790	83	127	5·9	4,982	6·4
" 1926-30......	21,298	24·7	6,256	7·3	15,042	17·5	1,560	73	126	5·9	6,036	7·0
" 1931-35......	20,325	21·9	6,037	6·5	14,288	15·4	1,260	62	91	4·5	5,680	6·1
" 1936-40......	18,675	20·4	6,366	7·0	12,310	13·4	1,025	55	68	3·6	6,599	7·2
" 1941-45......	18,444	21·7	6,437	7·6	12,007	14·1	858	47	52	2·8	6,541	7·7
" 1946-50......	21,907	26·3	6,473	7·8	15,434	18·5	883	40	29	1·3	7,413	8·9
1946..............	21,433	25·7	6,422	7·7	15,011	18·0	1,004	47	36	1·7	8,279	9·9
1947..............	23,334	27·9	6,610	7·9	16,724	20·0	1,018	44	38	1·6	7,674	9·2
1948..............	21,562	25·7	6,496	7·8	15,066	17·9	867	40	22	1·0	7,171	8·6
1949..............	21,662	26·0	6,596	7·9	15,066	18·1	834	39	27	1·2	7,037	8·5
1950..............	21,546	25·9	6,243	7·5	15,303	18·4	690	32	21	1·0	6,904	8·3
1951..............	21,733	26·1	6,440	7·7	15,293	18·4	676	31	22	1·0	6,805	8·2
1952..............	22,605	26·8	6,625	7·9	15,980	18·9	787	35	13	0·6	6,944	8·2
Alberta—												
Av. 1921-25......	15,461	26·0	4,953	8·3	10,508	17·7	1,327	86	97	6·3	4,313	7·3
" 1926-30......	15,924	24·2	5,530	8·4	10,393	15·8	1,195	75	105	6·6	5,265	8·0
" 1931-35......	16,557	22·1	5,447	7·3	11,110	14·8	997	60	75	4·5	5,530	7·4
" 1936-40......	16,282	20·8	6,054	7·7	10,228	13·1	869	53	73	4·5	7,192	9·2
" 1941-45......	18,845	23·7	6,355	8·0	12,490	15·7	827	44	46	2·4	7,977	10·0
" 1946-50......	24,290	28·4	6,814	8·0	17,476	20·4	889	37	25	1·0	9,090	10·6
1946..............	22,184	27·6	6,601	8·2	15,583	19·4	945	43	32	1·4	9,478	11·8
1947..............	24,631	29·9	6,543	7·9	18,088	22·0	915	37	22	0·9	8,797	10·7
1948..............	24,075	28·2	6,987	8·2	17,088	20·0	930	39	29	1·2	8,844	10·4
1949..............	24,935	28·2	7,083	8·0	17,852	20·2	823	33	25	1·0	9,037	10·2
1950..............	25,625	28·1	6,856	7·5	18,769	20·6	831	32	19	0·7	9,294	10·2
1951..............	27,003	28·8	7,167	7·6	19,836	21·2	889	33	15	0·6	9,305	9·9
1952..............	29,105	30·0	7,345	7·6	21,760	22·4	879	30	15	0·5	9,514	9·8
British Columbia—												
Av. 1921-25......	10,256	18·4	4,812	8·7	5,444	9·8	621	61	61	5·9	3,971	7·1
" 1926-30......	10,355	16·2	5,986	9·3	4,369	6·8	571	55	63	6·1	4,786	7·5
" 1931-35......	10,005	14·0	6,344	8·9	3,661	5·1	463	46	53	5·3	4,267	6·0
" 1936-40......	12,106	15·6	7,697	9·9	4,408	5·7	532	44	46	3·8	7,053	9·1
" 1941-45......	17,705	19·8	9,368	10·5	8,337	9·3	684	39	46	2·6	9,535	10·7
" 1946-50......	25,859	24·0	10,992	10·2	14,867	13·9	868	34	31	1·2	11,564	10·7
1946..............	22,609	22·5	10,137	10·1	12,472	12·4	852	38	38	1·7	11,762	11·7
1947..............	26,286	25·2	10,613	10·2	15,673	15·0	959	36	32	1·2	11,852	11·4
1948..............	25,984	24·0	11,316	10·5	14,668	13·5	868	33	29	1·1	11,718	10·8
1949..............	27,301	24·5	11,315	10·2	15,986	14·3	858	31	28	1·0	11,376	10·2
1950..............	27,116	23·8	11,581	10·2	15,535	13·6	805	30	27	1·0	11,110	9·8
1951..............	28,077	24·1	11,638	10·0	16,439	14·1	839	30	20	0·7	11,272	9·7
1952..............	29,827	24·9	12,080	10·1	17,747	14·8	870	29	18	0·6	11,081	9·2

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[1] Under one year of age. [2] Per 1,000 population. [3] Per 1,000 live births.

1.—Summary of Principal Vital Statistics, by Province, 1921-52—concluded

Province and Year	Live Births		Deaths		Natural Increase		Infant Mortality[1]		Maternal Mortality		Marriages	
	No.	Rate[2]	No.	Rate[2]	No.	Rate[2]	No.	Rate[3]	No.	Rate[3]	No.	Rate[2]
Canada—[4]												
Av. 1921-25	247,538	27·4	101,260	11·2	146,277	16·2	24,337	98	1,226	5·0	66,078	7·3
" 1926-30	236,521	24·1	108,925	11·1	127,596	13·0	22,063	93	1,339	5·7	71,886	7·3
" 1931-35	228,352	21·5	103,602	9·8	124,750	11·7	17,101	75	1,153	5·0	68,594	6·5
" 1936-40	228,767	20·5	109,514	9·8	119,253	10·7	14,701	64	1,043	4·6	96,824	8·7
" 1941-45	276,832	23·5	115,144	9·8	161,688	13·7	15,093	55	791	2·9	113,936	9·7
" 1946-50	354,869	27·4	119,975	9·3	234,894	18·1	15,620	44	523	1·5	126,687	9·8
1946	330,732	27·0	114,931	9·4	215,801	17·6	15,434	47	595	1·8	134,088	10·9
1947	359,094	28·7	117,725	9·4	241,369	19·3	16,336	45	554	1·5	127,311	10·2
1948	347,307	27·1	119,384	9·3	227,923	17·8	15,164	44	510	1·5	123,314	9·6
1949	366,139	27·3	121,047	9·2	242,092	18·1	15,843	43	536	1·5	123,877	9·2
1950	371,071	27·1	123,789	9·0	247,282	18·1	15,324	41	420	1·1	124,845	9·1
1951	380,101	27·2	125,454	9·0	254,647	18·2	14,584	38	405	1·1	128,230	9·2
1952	402,527	27·9	125,950	8·7	276,577	19·2	15,303	38	374	0·9	128,301	8·9

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[1] Under one year of age. [2] Per 1,000 population. [3] Per 1,000 live births. [4] Figures for Newfoundland are included for 1949–52 only.

2.—Summary of Principal Vital Statistics for Urban Centres of 10,000 Population or Over,[1] 1946-52

Province and Urban Centre	Births			Deaths			Natural Increase			Infant Deaths		
	Av. 1946-1950	1951	1952	Av. 1946-1950	1951	1952	Av. 1946-1950	1951	1952	Av. 1946-1950	1952	Rate per 1,000 Live Births 1952
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland—												
St. John's	1,572	1,646	1,834	[2]	541	504	[2]	1,105	1,330	89	89	49
P. E. Island—												
Charlottetown	497	461	481	205	190	205	292	271	276	17	12	25
Nova Scotia—												
Dartmouth	500	584	584	109	90	81	391	494	503	16	6	10
Glace Bay	782	671	713	226	209	228	556	462	485	40	37	52
Halifax	2,366	2,242	2,447	749	676	717	1,617	1,566	1,730	80	63	26
New Waterford	354	357	362	94	93	86	260	264	276	22	21	58
Sydney	1,011	1,048	1,032	307	283	247	704	765	785	46	22	21
Truro	333	292	296	104	103	82	229	189	214	15	6	20
New Brunswick—												
Edmundston	385	390	402	70	79	62	315	311	340	21	15	37
Fredericton	442	437	465	140	163	149	302	274	316	14	12	26
Moncton	769	723	802	219	254	202	550	469	600	31	17	21
Saint John	1,595	1,395	1,481	638	539	574	957	856	907	77	44	30
Quebec—												
Arvida	388	370	393	46	36	46	342	334	347	19	20	51
Cap de la Madeleine	518	648	706	115	140	122	403	508	584	29	19	27
Chicoutimi	972	958	973	195	204	209	777	754	764	59	71	73
Drummondville	471	536	501	103	153	133	368	383	368	22	33	66
Granby	683	758	873	154	158	160	529	600	713	27	23	26
Grand'Mère	329	363	412	82	90	73	247	273	339	15	19	46
Hull	1,390	1,489	1,502	359	377	446	1,031	1,112	1,056	78	111	74
Jacques-Cartier	..	..	864	..	..	202	..	..	662	..	71	82
Joliette	436	483	473	162	182	187	274	301	286	26	17	36
Jonquière	833	899	940	145	163	157	688	736	783	56	54	57
Lachine	657	692	734	213	219	231	444	473	503	21	16	22
Lasalle	257	389	422	59	81	89	198	308	333	8	17	40
Lévis	357	323	336	127	132	115	230	191	221	14	18	54
Longueuil	312	342	346	89	91	100	223	251	246	16	14	40
Magog	407	443	422	104	88	119	303	355	303	21	16	38

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[1] As at the 1951 Census. [2] Not available for the first year of the period.

2.—Summary of Principal Vital Statistics for Urban Centres of 10,000 Population or Over,[1] 1946-52—continued

Province and Urban Centre	Births			Deaths			Natural Increase			Infant Deaths		
	Av. 1946-1950	1951	1952	Av. 1946-1950	1951	1952	Av. 1946-1950	1951	1952	Av. 1946-1950	1952	Rate per 1,000 Live Births 1952
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Quebec—concluded												
Montreal	24,535	26,439	27,495	9,877	10,115	10,076	14,658	16,324	17,419	1,062	1,001	36
Montreal North	305	420	490	70	88	95	235	332	395	12	26	53
Mount Royal	154	226	220	42	69	62	112	157	158	4	3	14
Outremont	335	295	276	279	256	274	56	39	2	7	7	25
Quebec	4,275	4,195	4,256	1,709	1,720	1,755	2,566	2,475	2,501	321	348	82
Rimouski	381	404	421	93	89	93	288	315	328	21	27	64
Rouyn	455	602	570	80	92	90	375	510	480	20	33	58
St. Hyacinthe	530	587	602	253	270	219	277	317	383	25	16	27
St. Jean	500	543	620	143	187	171	357	356	449	19	28	45
St. Jérôme	560	595	604	134	137	137	426	458	467	31	26	43
St. Laurent	380	722	770	105	161	135	275	561	635	15	21	27
St. Michel	214	331	406	36	62	65	178	269	341	10	16	39
Shawinigan Falls	883	860	858	181	191	184	702	669	674	42	31	36
Sherbrooke	1,459	1,719	1,731	434	497	439	1,025	1,222	1,292	87	78	45
Sillery	..	..	258	..	..	57	..	..	201	..	5	19
Sorel	470	449	503	153	143	121	317	306	382	27	29	58
Thetford Mines	449	541	543	142	133	140	307	408	403	21	27	50
Three Rivers	1,300	1,443	1,414	411	436	366	889	1,007	1,048	84	70	50
Valleyfield	677	724	733	170	183	183	507	541	550	30	33	45
Verdun	1,771	1,730	1,842	566	572	576	1,205	1,158	1,266	61	41	22
Victoriaville	409	450	447	108	142	124	301	308	323	29	32	72
Westmount	292	254	284	294	294	286	−2	−40	−2	9	13	46
Ontario—												
Barrie	324	328	391	125	143	122	199	185	269	9	13	33
Belleville	483	515	548	202	193	208	281	322	340	18	17	31
Brantford	972	936	958	405	422	404	567	514	554	39	35	37
Brockville	336	283	301	155	139	149	181	144	152	14	12	40
Chatham	518	587	553	218	224	224	300	363	329	19	13	24
Cornwall	572	514	527	183	199	150	389	315	377	26	19	36
Eastview	409	492	563	82	80	87	327	412	476	18	28	50
Forest Hill	193	209	239	93	104	111	100	105	128	5	4	17
Fort William	918	951	968	299	347	301	619	604	667	30	26	27
Galt	436	454	474	191	185	201	245	269	273	14	11	23
Guelph	650	698	705	277	287	276	373	411	429	26	24	34
Hamilton	4,548	5,102	5,581	1,837	1,990	1,984	2,711	3,112	3,597	135	183	33
Kingston	953	913	1,164	396	420	430	557	493	734	28	31	27
Kitchener	1,032	1,158	1,310	366	344	412	666	814	898	30	41	31
Leaside	310	316	334	69	96	95	241	220	239	8	9	27
London	2,279	2,353	2,405	1,006	1,033	1,053	1,273	1,320	1,352	76	58	24
Mimico	252	300	305	81	100	89	171	200	216	8	8	26
New Toronto	207	214	244	64	77	77	143	137	167	7	—	—
Niagara Falls	620	541	556	237	242	226	383	299	330	17	20	36
North Bay	480	496	513	171	190	176	309	306	337	18	27	53
Orillia	336	382	344	130	157	117	206	225	227	16	11	32
Oshawa	727	941	1,172	258	320	310	469	621	862	26	44	38
Ottawa	4,332	5,011	5,197	1,764	1,946	2,077	2,568	3,065	3,120	168	200	38
Owen Sound	418	406	414	174	234	184	244	172	230	17	13	31
Pembroke	361	399	420	132	111	136	229	288	284	19	22	52
Peterborough	1,031	1,071	1,116	359	370	341	672	701	775	32	28	25
Port Arthur	786	826	969	304	331	354	482	495	615	30	17	18
Port Colborne	306	334	367	95	108	99	211	226	268	6	14	38
St. Catharines	874	857	930	345	358	377	529	499	553	29	23	25
St. Thomas	423	444	413	239	238	209	184	206	204	19	12	29
Sarnia	620	937	1,212	229	248	301	391	689	911	18	41	34
Sault Ste. Marie	849	891	1,003	289	285	288	560	606	715	38	25	25
Stratford	420	437	450	241	215	217	179	222	233	16	15	33
Sudbury	1,344	1,550	1,657	294	307	316	1,050	1,243	1,341	61	70	42
Timmins	867	814	852	202	220	211	665	594	641	38	32	38
Toronto	14,344	14,033	14,472	7,820	7,700	7,695	6,524	6,333	6,777	435	379	26
Trenton	343	331	363	99	90	99	244	241	264	12	9	25
Waterloo	262	293	351	88	97	100	174	196	251	8	11	31
Welland	391	411	462	134	110	129	257	301	333	15	9	19
Windsor	2,945	3,158	3,098	1,047	1,093	1,118	1,898	2,065	1,980	114	95	31
Woodstock	334	342	398	157	162	165	177	180	233	10	13	33

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[1] As at the 1951 Census.

2.—Summary of Principal Vital Statistics for Urban Centres of 10,000 Population or Over,[1] 1946-52—concluded

Province and Urban Centre	Births			Deaths			Natural Increase			Infant Deaths		
	Av. 1946-1950	1951	1952	Av. 1946-1950	1951	1952	Av. 1946-1950	1951	1952	Av. 1946-1950	1952	Rate per 1,000 Live Births 1952
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Manitoba—												
Brandon	442	459	528	195	210	193	247	249	335	19	11	21
St. Boniface	657	720	698	179	189	190	478	531	508	22	15	21
Winnipeg	5,200	5,323	5,561	2,254	2,346	2,320	2,946	2,977	3,241	164	140	25
Saskatchewan—												
Moose Jaw	613	614	691	237	292	273	376	322	418	24	18	26
Prince Albert	481	533	552	134	122	159	347	411	393	23	24	43
Regina	1,665	1,803	1,911	493	545	554	1,172	1,258	1,357	58	47	25
Saskatoon	1,393	1,534	1,614	435	488	564	958	1,046	1,050	57	51	32
Alberta—												
Calgary	2,968	3,649	4,059	1,094	1,146	1,232	1,874	2,503	2,827	100	107	26
Edmonton	4,122	5,089	5,949	1,037	1,152	1,319	3,085	3,937	4,630	130	162	27
Lethbridge	567	701	716	167	184	170	400	517	546	18	16	22
Medicine Hat	397	399	421	139	140	166	258	259	255	14	5	12
British Columbia—												
New Westminster	587	523	565	257	238	273	330	285	292	15	12	21
North Vancouver	512	569	699	184	214	184	328	355	515	10	18	26
Penticton	..	..	255	..	..	79	..	..	176	..	8	31
Trail	349	404	388	69	70	76	280	334	312	7	10	26
Vancouver	7,367	7,456	7,806	3,903	3,975	4,186	3,464	3,481	3,620	190	180	23
Victoria	1,148	1,084	1,052	749	750	756	399	334	296	26	23	22

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[1] As at the 1951 Census.

Section 2.—Births

International Comparisons.—A comparison of the birth rates in Canada and the provinces with those in other countries is shown in Table **3**.

3.—Birth Rates per 1,000 Population in Selected Countries compared with Canada and the Provinces, 1952

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. Provisional data are used where certain final figures are not available.)

Country or Province	Birth Rate	Country or Province	Birth Rate	Country	Birth Rate
Mexico	43·9	**Canada**—concluded		Netherlands	22·4
Venezuela	43·7	Manitoba	26·0	Ireland	21·8
Ceylon	39·5	Ontario	26·0	Northern Ireland	20·9
Chile	33·6	British Columbia	24·9	Spain	20·8
Yugoslavia	29·7			France[2]	19·2
		India[1]	26·8	Norway	18·7
		Japan	26·0	Denmark	17·8
Canada	**27·9**	Peru	25·9	Scotland	17·7
Newfoundland	33·6			Italy	17·6
New Brunswick	31·7	Union of South Africa (Whites)	25·9	Switzerland	17·4
Quebec	30·3	New Zealand	24·8	Belgium	16·8
Alberta	30·0	Portugal	24·7	Western Germany	15·7
Nova Scotia	27·5	United States	24·6	Sweden	15·5
Saskatchewan	26·8	Australia	23·3	England and Wales	15·3
Prince Edward Island	26·2	Finland	23·1	Austria	14·8

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[1] Registration area only.

[2] Excludes infants who were born alive but died before registration of birth.

Canadian Births.—In Canada, the birth rate in 1921 was 29 per 1,000 population. As a rate of 35 per 1,000 is very high for countries of modern western civilization, the Canadian birth rate had probably not fallen far or for long before 1921. It fell continuously until 1937 when it was 20 per 1,000 but then, owing to economic recovery and the War, it rose to 22 in 1940, to 24 in 1943 and reached its highest point in 1947 at 28·7. As was the case in most other countries, there was a slight decline in 1948 but the Canadian rate remained remarkably steady at just over 27 for the four years 1948 to 1951. However, it rose to 27·9 in 1952 when, for the first time, more than 400,000 births were registered. The birth rates in the provinces followed the same general trend with a similar increase in the 1952 rate.

It has always been assumed that the Province of Quebec has had the highest birth rate in Canada, but Table **1** shows that since the late 1930's or early 1940's Newfoundland and New Brunswick have had higher birth rates than Quebec. In 1952 Newfoundland had a crude rate of 33·6, New Brunswick 31·7 and Quebec 30·3; British Columbia had the lowest rate at 24·9. However, these crude rates are based on total population and therefore do not reflect the fertility of the women who are of reproductive age in the different provinces. A more accurate measure of fertility is the rate based on the number of married women in the population in the reproductive age group, 15 to 49. The following are birth rates per 1,000 married women in the age group 15 to 49, by province:—

Newfoundland..........	220	Quebec.................	193	Alberta................	160
Prince Edward Island...	186	Ontario.................	138	British Columbia.......	130
Nova Scotia............	162	Manitoba...............	147	CANADA (Exclusive of the Territories).......	160
New Brunswick........	200	Saskatchewan..........	155		

On this basis, Newfoundland still had the highest birth rate, followed by New Brunswick and Quebec, and British Columbia had the lowest rate.

Sex of Live Births.—Wherever birth statistics have been collected, they have shown an excess of male over female births. No conclusive explanation of this excess has yet been given. Nevertheless it is so much of an accepted statistical fact that a proper ratio of male to female births has become one of the criteria of complete registration. The number of males to every 1,000 females born in Canada in 1941-52 varied between 1,051 and 1,067. In 1952 there were 1,064 males born for every 1,000 females. Variations in the provincial sex ratios are due to chance variation because of the relatively small number of births involved—the smaller the total number of births, the greater the chance of wide sex-ratio variations from year to year.

4.—Sex Ratio of Live Births, by Province, 1921-52

Province and Year	Male	Female	Males to 1,000 Females	Province and Year	Male	Female	Males to 1,000 Females
	No.	No.	No.		No.	No.	No.
Newfoundland.......1951	5,984	5,754	1,040	Nova Scotia........1921	6,695	6,326	1,058
1952	6,443	6,118	1,053	1931	5,931	5,684	1,043
P. E. Island.........1921	1,073	1,083	991	1941	7,074	6,829	1,036
1931	998	881	1,132	1951	8,842	8,283	1,067
1941	1,078	971	1,110	1952	9,275	8,676	1,069
1951	1,373	1,278	1,074				
1952	1,405	1,298	1,082				

4.—Sex Ratio of Live Births, by Province, 1921-52—concluded

Province and Year	Male	Female	Males to 1,000 Females	Province and Year	Male	Female	Males to 1,000 Females
	No.	No.	No.		No.	No.	No.
New Brunswick.....1921	5,942	5,523	1,076	Saskatchewan.......1921	11,620	10,873	1,069
1931	5,548	5,253	1,056	1931	10,942	10,389	1,053
1941	6,200	6,072	1,021	1941	9,472	8,992	1,053
1951	8,190	7,885	1,039	1951	11,107	10,626	1,045
1952	8,429	8,262	1,020	1952	11,659	10,946	1,065
Quebec.............1921	46,705	42,044	1,111	Alberta............1921	8,493	8,068	1,053
1931	43,051	40,555	1,062	1931	8,938	8,314	1,075
1941	45,905	43,304	1,060	1941	8,882	8,426	1,054
1951	62,160	58,770	1,058	1951	13,760	13,243	1,039
1952	65,265	61,151	1,067	1952	14,969	14,136	1,059
Ontario............1921	38,307	35,845	1,069	British Columbia...1921	5,549	5,104	1,087
1931	35,609	33,600	1,060	1931	5,350	5,054	1,059
1941	37,254	35,008	1,064	1941	7,694	7,344	1,048
1951	59,220	55,607	1,065	1951	14,418	13,659	1,056
1952	63,986	59,905	1,068	1952	15,413	14,414	1,069
Manitoba...........1921	9,455	9,023	1,048	**Canada** (Exclusive **1921**	**133,839**	**123,889**	**1,080**
1931	7,255	7,121	1,019	of the Territories) **1931**	**123,622**	**116,851**	**1,058**
1941	7,616	7,196	1,058	**1941**	**131,175**	**124,142**	**1,057**
1951	10,374	9,568	1,084	**1951**	**195,428**	**184,673**	**1,058**
1952	10,630	10,147	1,048	**1952**	**207,474**	**195,053**	**1,064**

Hospitalized Births.—In 1952 over 81 p.c. of all Canadian births occurred in hospital. Although the proportions of hospitalized births have increased steadily since 1921 in all provinces, these proportions still vary widely. The existence of prepaid or provincially sponsored hospital, maternity or medical-care plans in some provinces, the unavailability of hospital facilities in others, particularly in remote rural areas, and preference for home delivery in some local areas are among the factors accounting for provincial variations in this respect. The noticeable increases in hospitalized births within recent years in those provinces that previously had the lowest proportions may be partly the result of increased hospital services and facilities being provided in those areas.

5.—Percentage of Live Births Hospitalized, by Province, 1931-52

(Exclusive of Newfoundland and the Territories)

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1931............	11·2	19·0	12·1	7·3	38·2	43·6	32·5	47·8	65·0	26·8
1941............	32·7	50·4	30·8	17·6	67·5	73·6	63·2	77·1	87·3	48·9
1949............	81·2	82·2	66·4	44·4	89·2	89·9	93·9	95·6	96·7	74·3
1950............	84·3	84·9	67·8	47·8	90·4	91·1	94·6	95·8	96·9	76·0
1951............	88·3	87·2	70·7	53·0	93·1	93·1	95·2	93·6	97·3	79·1
1952............	87·1	88·8	74·0	56·7	94·6	93·7	96·4	96·4	97·5	81·5

Births in Urban Centres.—Table 2 shows the number of births, regardless of where they occurred, to mothers residing in urban centres of over 10,000 population. (Pp. 189-191.)

Illegitimacy.—In 1952 less than 4 p.c. of the live births in Canada were illegitimate. This percentage is low compared with that of many countries of the world. In the 5-year period 1926-30 it was 3 p.c., whereas the average of the ten years 1943-52 was just over 4 p.c. The apparent increase was partly the result of more complete registration of illegitimate births brought about by the co-operation of provincial registration officials and social welfare agencies.

6.—Illegitimate Live Births and Percentages of Total Live Births, by Province, 1921-52

(Exclusive of the Territories)

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
	ILLEGITIMATE LIVE BIRTHS										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Av. 1921-25	..	46	457	245	..	1,658	407	291	321	152	..
" 1926-30	168	42	558	299	2,334	2,196	501	489	479	240	7,138
" 1931-35	205	74	652	373	2,431	2,707	501	651	613	330	8,333
" 1936-40	246	83	766	415	2,539	2,939	506	663	643	475	9,030
" 1941-45	406	107	1,074	591	3,003	3,751	597	673	852	889	11,536
" 1946-50	441	152	1,244	754	3,382	4,256	766	914	1,202	1,516	14,375
1951	417	138	1,147	643	3,650	3,807	771	971	1,272	1,633	14,449
1952	315	118	1,041	648	3,913	3,920	952	994	1,310	1,857	15,068
	PERCENTAGES OF TOTAL LIVE BIRTHS										
Av. 1921-25	..	2·3	3·8	2·2	..	2·3	2·5	1·3	2·1	1·5	..
" 1926-30	2·5	2·4	5·1	2·9	2·8	3·2	3·5	2·3	3·0	2·3	3·0
" 1931-35	3·1	3·8	5·7	3·6	3·1	4·2	3·7	3·2	3·7	3·3	3·6
" 1936-40	3·2	4·0	6·4	3·7	3·2	4·6	3·7	3·6	3·9	3·9	3·9
" 1941-45	4·4	4·9	7·1	4·5	3·1	4·8	3·8	3·6	4·5	5·0	4·2
" 1946-50	3·6	5·3	6·9	4·5	2·9	4·0	4·0	4·2	4·9	5·9	4·1
1951	3·6	5·2	6·7	4·0	3·0	3·3	3·9	4·5	4·7	5·8	3·8
1952	2·5	4·4	5·8	3·9	3·1	3·2	4·6	4·4	4·5	6·2	3·7

[1] Figures for Newfoundland are included for 1949-52 only.

Stillbirths.—The rate of stillbirths has been falling since 1926, though not equally in all provinces. The rate of stillbirths to unmarried mothers has always been considerably higher than that for married mothers, and consequently higher than the over-all rate; but this difference has been disappearing in recent years.

7.—Stillbirths and Rates per 1,000 Live Births, by Province, 1921-52

(Exclusive of the Territories)

Year	Born to All Mothers											Born to Unmarried Mothers²	
	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada¹	No.	P.C. of Total
	STILLBIRTHS												
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Av. 1921-25....	..	57	457	288	2,659	3,083	546	601	418	295	8,403	..	..
" 1926-30....	128	43	365	283	2,212	2,761	479	551	467	297	7,458	356	4·77
" 1931-35....	141	67	401	302	2,337	2,284	383	488	421	247	6,930	381	5·50
" 1936-40....	162	61	334	282	2,386	2,008	340	393	359	248	6,410	337	5·26
" 1941-45....	191	50	388	295	2,786	1,988	345	348	327	309	6,838	355	5·20
" 1946-50....	215	54	358	320	2,898	2,020	349	350	385	352	7,177	343	4·85
1951...........	189	56	319	293	2,768	1,975	340	303	402	365	7,010	327	4·79
1952...........	226	45	369	281	2,805	2,085	361	314	399	375	7,260	341	4·85
	RATES PER 1,000 LIVE BIRTHS											Per 1,000 Illegitimate Live Births²	
Av. 1921-25....	..	29·1	37·7	26·0	30·5	43·1	32·9	27·9	27·0	28·7	33·9	..	
" 1926-30....	19·0	24·8	33·1	27·4	26·7	40·2	33·3	25·9	29·3	28·7	31·5	49·9	
" 1931-35....	21·1	34·2	34·9	28·9	29·6	35·1	28·0	24·0	25·4	24·7	30·3	45·7	
" 1936-40....	21·2	29·7	27·7	25·4	30·4	31·2	25·2	21·0	22·0	20·5	28·0	37·3	
" 1941-45....	20·5	22·8	25·6	22·6	28·5	25·6	21·8	18·9	17·4	17·5	24·7	30·8	
" 1946-50....	17·4	18·9	19·9	19·0	25·1	19·2	18·1	16·0	15·9	13·6	20·2	24·2	
1951...........	16·1	21·1	18·6	18·2	22·9	17·2	17·0	13·9	14·9	13·0	18·4	23·3	
1952...........	18·0	16·6	20·6	16·8	22·2	16·8	17·4	13·9	13·7	12·6	18·0	23·1	

¹ Figures for Newfoundland are included for 1951 and 1952 only. ² Exclusive of Newfoundland.

Multiple Births.—Approximately one confinement in 85 in Canada results in the birth of more than one child. In the period 1926-52 there have been 87,057 such confinements, of which 86,267 were twins and 780 were triplets. There have been nine sets of quadruplets and one set of quintuplets, the Dionne quintuplets who were born in 1934.

The proportion of stillbirths is higher among multiple than among single births. It is about twice as high for twins and between three and five times as high for triplets.

8.—Single and Multiple Births, Live and Stillborn, 1950-52

(Exclusive of the Territories)

Confinements and Births	Numbers			Percentages		
	1950	1951	1952	1950	1951	1952
Confinements—						
Single..........................	369,578	378,246	400,496	98·8	98·8	98·9
Twin..........................	4,285	4,377	4,587	1·1	1·1	1·1
Triplet..........................	34	37	39	--	--	--
Quadruplet....................	—	—	—	—	—	—
Totals, Confinements.......	**373,897**	**382,660**	**405,122**	**100·0**	**100·0**	**100·0**

8.—Single and Multiple Births, Live and Stillborn, 1950-52—concluded

(Exclusive of the Territories)

Confinements and Births	Numbers			Percentages		
	1950	1951	1952	1950	1951	1952
Births—						
Single—						
Live	362,712	371,539	393,597	98·1	98·2	98·3
Stillborn	6,866	6,707	6,899	1·9	1·8	1·7
Twin—						
Live	8,261	8,458	8,822	96·4	96·6	96·2
Stillborn	309	296	352	3·6	3·5	3·8
Triplet—						
Live	98	104	108	96·1	93·7	92·3
Stillborn	4	7	9	3·9	6·3	7·7
Quadruplet—						
Live	—	—	—	—	—	—
Stillborn	—	—	—	—	—	—
Totals, Births	**378,250**	**387,111**	**409,787**	**100·0**	**100·0**	**100·0**
Live	371,071	380,101	402,527	98·1	98·2	98·2
Stillborn	7,179	7,010	7,260	1·9	1·8	1·8

Fertility Rates.*—Sex and age distribution of the population is an important factor in determining birth, death and marriage rates. Since more than 95 p.c. of children are born to women between the ages of 15 and 50, as was noted earlier, variations in the proportion of women of these ages to the population as a whole will cause variations in the birth rates of different countries or regions, even though the fertility of women at each age may be the same. Measures of fertility which are independent of the sex and age distribution of the population have, therefore, been devised. The best known of these are age-specific fertility rates and reproduction rates.

Ages of Parents.—Ages of the parents is an important variable in any analysis of birth statistics. The numerical and percentage distribution of legitimate live births by the ages of the parents is given for 1941, 1951, and 1952 in Table **9**, of illegitimate live births by the age of the mother in Table **10**, and of stillbirths by the age of the mother in Table **11**, as well as the average ages of the parents for each year shown.

Besides the fertility rates at each age, three other factors help, in the main, to determine the average age of parents having children: firstly, the average age of potential parents, at any point in time, that is, of the population between the ages of 15 and 50; secondly, the average age of couples at marriage; and thirdly, the proportions of first and second births to total births. Other things being equal, a high proportion of first and second births will result in a lower average age of parents. In 1930-32, first and second births were 43 p.c. of the total births. By the period 1945-48, first and second births together were 57 p.c. of the total. This change is very great and accounts for the lower average age of parents in the latter period. However, by 1952 the proportion of first and second births had declined to about 53 p.c.

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* This subject is treated in detail in DBS report, *Gross and Net Reproduction Rates, Canada and the Provinces*, and is available on request.

These tables illustrate other significant facts: that the average age of fathers of legitimate children is about four years higher than the average age of mothers; that the average age of mothers of illegitimate children is four to five years lower than the average age of mothers of legitimate children—in 1930-32 the difference was six years (the fact that about 70 p.c. of illegitimate children are born to mothers under 25 years of age accounts for this difference); and that the average age of mothers of stillborn children is higher than that of the live born. Further, Table **11** shows that the rate of stillbirths per 1,000 live births increases with the age of the mother. It is over three times as high among mothers of 40-44 years and over four times as high among mothers of 45-49 years as it is among mothers at the ages of 20-24.

9.—Legitimate Live Births, by Age of Parent, 1941, 1951 and 1952

(Exclusive of Newfoundland and the Territories)

Age Group	Fathers						Mothers					
	1941		1951		1952		1941		1951		1952	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Under 20 years..........	1,203	0·5	2,874	0·8	2,904	0·8	14,185	5·8	19,930	5·6	21,332	5·7
20 – 24 “	29,857	12·2	51,458	14·6	56,711	15·2	67,185	27·4	96,058	27·1	102,586	27·4
25 – 29 “	69,184	28·2	102,368	29·0	106,946	28·7	74,461	30·4	109,850	31·0	114,760	30·6
30 – 34 “	63,436	25·9	86,981	24·7	93,553	25·1	49,484	20·2	73,554	20·8	79,490	21·2
35 – 39 “	42,508	17·4	59,690	16·9	61,985	16·6	28,507	11·6	41,170	11·6	42,827	11·4
40 – 44 “	22,711	9·3	31,243	8·9	32,816	8·8	10,163	4·1	12,551	3·5	12,993	3·5
45 – 49 “	10,567	4·3	12,459	3·5	12,797	3·4	1,049	0·4	1,015	0·3	985	0·3
50 years or over.........	5,515	2·3	5,469	1·6	5,514	1·5	19	--	28	--	12	--
Totals, Stated Ages..	**244,981**	**100·0**	**352,542**	**100·0**	**373,226**	**100·0**	**245,053**	**100·0**	**354,156**	**100·0**	**374,985**	**100·0**
Ages not stated.........	235	...	1,789	...	1,987	...	163	...	175	...	228	...
Totals, All Ages......	**245,216**	**100·0**	**354,331**	**100·0**	**375,213**	**100·0**	**245,216**	**100·0**	**354,331**	**100·0**	**375,213**	**100·0**
Average ages............	32·7		32·1		32·0		28·5		28·4		28·4	

10.—Illegitimate Live Births, by Age of the Mother, 1941, 1951 and 1952

(Exclusive of Newfoundland and the Territories)

Age Group of Mother	1941		1951		1952	
	No.	p.c.	No.	p.c.	No.	p.c.
Under 20 years..........................	2,762	29·9	4,463	33·0	4,575	32·2
20 – 24 “	3,666	39·7	4,984	36·9	5,308	37·4
25 – 29 “	1,633	17·7	2,265	16·8	2,392	16·9
30 – 34 “	661	7·2	1,061	7·8	1,128	7·9
35 – 39 “	368	4·0	557	4·1	580	4·1
40 – 44 “	124	1·3	173	1·3	192	1·4
45 – 49 “	16	0·2	15	0·1	17	0·1
50 years or over.........................	1	--	1	--	—	—
Totals, Stated Ages................	**9,231**	**100·0**	**13,519**	**100·0**	**14,192**	**100·0**
Ages not stated.........................	870	...	513	...	561	...
Totals, All Ages.....................	**10,101**	**100·0**	**14,032**	**100·0**	**14,753**	**100·0**
Average ages of mothers................	23·9		23·8		23·9	

11.—Stillbirths, by Age of the Mother, together with Rates per 1,000 Live Births, 1941, 1951 and 1952

(Exclusive of Newfoundland and the Territories)

Age Group of Mother	Stillbirths						Rates per 1,000 Live Births		
	1941		1951		1952		1941	1951	1952
	No.	p.c.	No.	p.c.	No.	p.c.			
Under 20 years	383	5·6	412	6·1	371	5·3	22·6	16·9	14·3
20 – 24 "	1,486	21·8	1,485	21·9	1,470	21·1	21·0	14·7	13·6
25 – 29 "	1,862	27·3	1,714	25·3	1,800	25·8	24·5	15·3	15·4
30 – 34 "	1,442	21·1	1,405	20·7	1,523	21·8	28·8	18·8	18·9
35 – 39 "	1,081	15·8	1,192	17·6	1,181	16·9	37·4	28·6	27·2
40 – 44 "	496	7·3	503	7·4	566	8·1	48·2	39·5	42·9
45 – 49 "	74	1·1	63	0·9	61	0·9	69·5	61·2	60·9
50 years or over	3	--	1	--	2	--	--	--	--
Totals, Stated Ages	**6,827**	**100·0**	**6,775**	**100·0**	**6,974**	**100·0**	...	...	...
Ages not stated	55	...	46	...	60	...	...	...	...
Totals, All Ages	**6,882**	**100·0**	**6,821**	**100·0**	**7,034**	**100·0**	**27·0**	**18·5**	**18·0**
Average ages of mothers	29·9		30·0		30·2		...	...	...

Order of Birth.—Table **12** shows the order of birth of all live-born children according to the age of the mother. About 28 p.c. of live-born children in 1952 were first children. Among the illegitimate about 70 p.c. were the first born.

12.—Order of Birth of Live-Born Children, by Age of Mother, 1952

(Exclusive of Newfoundland and the Territories)

Order of Birth of Child	Age of Mother									
	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 or Over	Age Not Stated	All Ages
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1st child	112	19,949	50,085	27,001	9,642	3,329	744	31	568	111,461
2nd "	2	4,863	33,222	33,638	16,663	5,758	1,083	55	77	95,361
3rd "	—	849	15,533	25,344	17,621	7,296	1,387	70	46	68,146
4th "	—	113	6,201	14,950	12,682	6,394	1,448	75	26	41,889
5th "	—	14	2,057	8,061	8,151	4,939	1,269	69	12	24,572
6th "	—	4	573	4,345	5,617	3,776	1,156	62	7	15,540
7th "	—	1	160	2,136	3,874	2,871	989	78	7	10,116
8th "	—	—	38	1,064	2,715	2,425	880	89	3	7,214
9th "	—	—	15	389	1,650	2,004	803	64	1	4,926
10th "	—	—	3	139	1,005	1,576	747	55	2	3,527
11th "	—	—	3	45	537	1,119	656	65	1	2,426
12th "	—	—	—	20	266	793	584	56	3	1,722
13th "	—	—	—	9	119	457	478	78	1	1,142
14th "	—	—	—	1	42	287	339	53	—	722
15th "	—	—	—	4	16	174	272	47	—	513
16th "	—	—	—	—	8	109	151	23	—	291
17th "	—	—	—	—	3	55	95	14	1	168
18th "	—	—	—	—	2	24	49	15	—	90
19th "	—	—	—	—	1	10	26	10	—	47
20th or over	—	—	—	—	—	8	27	5	—	40
Not stated	—	—	4	6	4	3	2	—	34	53
Totals	**114**	**25,793**	**107,894**	**117,152**	**80,618**	**43,407**	**13,185**	**1,014**	**789**	**389,966**

Section 3.—Deaths

Declines in the death rate have been recorded in many countries during the past twenty years. Crude death rates should be used with caution in comparing the mortality levels of different populations, for they are affected by differences in the age composition of the population as well as by differences in the levels of mortality.

Subsection 1.—General Mortality

International Comparisons.—A comparison of the death rates in Canada and the provinces with those in certain other countries is shown in Table **13**. It will be noted that the death rate for Canada is among the lowest in the world and that the majority of the provinces have lower rates than most other countries.

13.—Death Rates per 1,000 Population in Selected Countries compared with Canada and the Provinces, 1952

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. Provisional data are used where certain final figures are not available.)

Country or Province	Death Rate	Country or Province	Death Rate	Country	Death Rate
Netherlands	7·3	Ontario	9·3	Northern Ireland	10·8
Norway	8·3	British Columbia	10·1	Venezuela	10·8
Union of South Africa (Whites)	8·6	Denmark	9·0	England and Wales	11·3
		Japan	9·0	Portugal	11·8
		New Zealand	9·3	Yugoslavia	11·8
Canada	8·7	Australia	9·4	Austria	11·9
Newfoundland	7·4	Finland	9·5	Ireland	11·9
Alberta	7·6	United States	9·6	Belgium	12·0
Saskatchewan	7·9	Sweden	9·6	Ceylon	12·0
Manitoba	8·2	Spain	9·7	Scotland	12·0
Quebec	8·4	Switzerland	9·9	France[1]	12·3
New Brunswick	8·8	Italy	10·0	Chile	13·8
Nova Scotia	8·8	Peru	10·1	India[2]	13·8
Prince Edward Island	8·9	Western Germany	10·5	Mexico	14·9

[1] Excludes infants who were born alive but died before registration of birth. [2] Registration area only.

Canadian Mortality.—Since 1931, the Canadian death rate has fluctuated between 10·3 and 8·7 per 1,000 of the population, declining in recent years and reaching a record low of 8·7 in 1952. As shown in Table **1**, pp. 187-189, this decline has been apparent in all provinces but in varying degrees. The generally low rates in the Prairie Provinces are partly the result of their younger average population and the uniformly higher rate in British Columbia is the result of the increasing proportion of people in the older age groups.

Sex and Age Distribution of Deaths.—Despite reductions in infant mortality over the past 25 or 30 years, more deaths still occur in the first year of life than in any other single year. Of the 107,000 deaths occurring in 1926, 31,000 or almost 30 p.c. were of children under five years of age, and three-quarters of those were of children under one year of age. In 1952, of the nearly 126,000 deaths, almost 18,000 or a little over 14 p.c. were of children under five years and five-sixths of those were under one year. Most of the reduction took place among children over one month of age but there was a notable decrease as well in all childhood ages up to five years.

Tremendous reductions have taken place in the mortality pattern since the early 1920's, with the most important reductions in the childhood and early adult ages. In 1926, over 19 p.c. of all male deaths were of persons five to 45 years of age; in 1952, these accounted for about 11 p.c. of total deaths. The reduction in mortality among females in this age group is equally remarkable, the proportion dropping from 22 p.c. to 10 p.c. Death rates for males up to age 45 have been roughly halved during the past 25 years; those for females, in the same ages, have been reduced as much as three to four times.

These reductions in the mortality rates in early and middle years of life have, of course, had the effect of increasing the number of people in the older age groups and of raising the average age of the population as a whole. As a natural consequence, much larger proportions of deaths are now occurring at the older ages. Further, the reductions in rates will eventually raise the average age at death. In 1921, the average age at death of males was 39·0 years and of females 41·1 years; by 1952 this had advanced to 55·8 and 58·2, respectively. These trends are indicated clearly in Table **14**.

14.—Distribution of Deaths, by Age and Sex, 1921, 1931, 1941, and 1952

Age Group	1921[1]		1931		1941		1952	
	Male	Female	Male	Female	Male	Female	Male	Female
	NUMBER							
Under 5 years	10,827	8,303	14,511	11,226	10,666	8,014	10,281	7,691
5 – 9 "	1,166	979	1,241	963	888	670	726	500
10 – 14 "	674	611	821	806	787	536	485	295
15 – 19 "	866	741	1,311	1,132	1,118	823	747	341
20 – 24 "	947	946	1,502	1,453	1,332	1,039	1,031	488
25 – 29 "	1,046	1,035	1,388	1,414	1,317	1,173	1,014	599
30 – 34 "	1,002	1,051	1,301	1,432	1,211	1,148	1,100	775
35 – 39 "	1,263	1,223	1,512	1,574	1,497	1,242	1,344	977
40 – 44 "	1,254	1,073	1,888	1,493	1,744	1,464	1,820	1,239
45 – 49 "	1,345	1,066	2,314	1,738	2,416	1,817	2,510	1,634
50 – 54 "	1,492	1,288	2,855	1,993	3,355	2,227	3,687	2,115
55 – 59 "	1,727	1,337	3,057	2,246	4,394	2,851	4,850	2,752
60 – 64 "	2,121	1,652	3,583	2,855	5,288	3,483	6,462	3,784
65 – 69 "	2,277	1,976	4,249	3,348	6,057	4,412	8,197	5,004
70 – 74 "	2,550	2,184	4,867	4,073	6,495	4,981	8,713	6,494
75 – 79 "	2,378	2,135	4,368	4,029	6,421	5,461	8,227	6,578
80 – 84 "	1,833	1,799	3,206	3,215	5,020	4,906	6,310	5,796
85 years or over	1,643	1,912	2,555	2,998	3,846	4,540	5,216	6,168
Totals, All Ages	**36,411**	**31,311**	**56,529**	**47,988**	**63,852**	**50,787**	**72,720**	**53,230**
	PERCENTAGE							
Under 5 years	29·8	26·5	25·7	23·4	16·7	15·8	14·1	14·5
5 – 9 "	3·2	3·1	2·2	2·0	1·4	1·3	1·0	0·9
10 – 14 "	1·9	2·0	1·5	1·7	1·2	1·1	0·7	0·6
15 – 19 "	2·4	2·4	2·3	2·4	1·8	1·6	1·0	0·6
20 – 24 "	2·6	3·0	2·7	3·0	2·1	2·0	1·4	0·9
25 – 29 "	2·9	3·3	2·5	2·9	2·1	2·3	1·4	1·1
30 – 34 "	2·7	3·4	2·3	3·0	1·9	2·3	1·5	1·5
35 – 39 "	3·5	3·9	2·7	3·3	2·3	2·4	1·8	1·8
40 – 44 "	3·4	3·4	3·3	3·1	2·7	2·9	2·5	2·3
45 – 49 "	3·7	3·4	4·1	3·6	3·8	3·6	3·5	3·1
50 – 54 "	4·1	4·1	5·0	4·2	5·3	4·4	5·1	4·0
55 – 59 "	4·7	4·3	5·4	4·7	6·9	5·6	6·7	5·2
60 – 64 "	5·8	5·3	6·3	5·9	8·3	6·9	8·9	7·1
65 – 69 "	6·2	6·3	7·5	7·0	9·5	8·7	11·3	9·4
70 – 74 "	7·0	7·0	8·6	8·5	10·2	9·8	12·0	12·2
75 – 79 "	6·5	6·8	7·7	8·4	10·1	10·7	11·3	12·4
80 – 84 "	5·0	5·7	5·7	6·7	7·9	9·7	8·7	10·9
85 years or over	4·5	6·1	4·5	6·2	6·0	8·9	7·2	11·6
Totals, All Ages	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

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[1] Excludes the Province of Quebec.

14.—Distribution of Deaths, by Age and Sex, 1921, 1931, 1941, and 1952—concluded

Age Group	1921[1]		1931		1941		1952	
	Male	Female	Male	Female	Male	Female	Male	Female
	Rate per 1,000 Population							
Under 5 years	28·9	22·7	26·8	21·2	20·0	15·5	11·3	8·8
5 – 9 "	3·1	2·7	2·2	1·7	1·7	1·3	1·0	0·7
10 – 14 "	2·1	1·9	1·5	1·5	1·4	1·0	0·8	0·5
15 – 19 "	3·1	2·7	2·5	2·2	2·0	1·5	1·4	0·6
20 – 24 "	3·7	3·7	3·2	3·2	2·6	2·0	1·9	0·9
25 – 29 "	4·0	4·1	3·4	3·8	2·7	2·5	1·8	1·0
30 – 34 "	3·8	4·5	3·5	4·2	2·8	2·8	2·1	1·4
35 – 39 "	4·7	5·5	4·2	4·8	3·8	3·4	2·6	1·9
40 – 44 "	5·6	5·9	5·4	5·0	5·0	4·5	3·9	2·8
45 – 49 "	7·3	7·1	7·2	6·6	7·3	6·0	6·3	4·4
50 – 54 "	9·8	10·2	10·7	9·0	10·6	8·1	10·6	6·4
55 – 59 "	15·2	13·5	15·4	13·4	16·0	12·3	16·3	9·6
60 – 64 "	21·9	19·7	22·9	20·7	24·2	18·5	24·5	15·4
65 – 69 "	33·4	33·2	35·2	30·3	37·3	30·4	35·6	23·9
70 – 74 "	56·9	52·8	55·0	49·1	58·5	47·0	52·3	40·4
75 – 79 "	89·4	80·9	87·4	82·9	95·7	79·7	83·3	66·4
80 – 84 "	133·8	122·4	134·1	127·1	147·6	131·2	132·6	109·6
85 years or over	228·2	224·9	228·1	212·6	241·9	229·3	223·9	204·2
Totals, All Ages	**10·9**	**10·2**	**10·5**	**9·6**	**10·8**	**9·1**	**10·0**	**7·5**
Average age at death	39·0	41·1	43·1	44·8	51·5	53·4	55·8	58·2

[1] Excludes the Province of Quebec.

Deaths in Urban Centres.—In Table **2** (pp. 189-91) deaths are classified by place of residence of the decedent. Death rates in urban centres vary only slightly from those of their respective provinces. However, owing to the influx of young people from the rural areas, the age distribution of the population in urban centres is often more favourable to a low death rate than that of the province as a whole.

Causes of Death.—Table **15** shows the deaths in Canada, grouped according to the International Abbreviated List of 50 Causes. About 80 p.c. are in the following groups of causes: diseases of the heart and arteries, cancer, accidents, diseases of early infancy, the respiratory diseases — tuberculosis, pneumonia and influenza — and nephritis.

The rise in the average age at death has already been noted (p. 200). Causes of death that mainly affect children and young adults have declined. Diphtheria, for example, has been almost wiped out and tuberculosis has been greatly reduced. On the other hand, the ageing of the population increases the proportion of deaths from certain causes that affect older people. Thus, cancer and the diseases of the cardio-vascular-renal systems now account for a substantially larger proportion of all deaths than formerly.

These trends indicate the remarkable success that has attended the attack by health authorities on the infective and contagious diseases which in the past have constituted such a great hazard in the early and young adult years of life. They have similarly served to emphasize the emergence of the chronic and degenerative conditions of later life as the targets towards which the public health programs of the future will be directed. In effect, Canada has shared the experience of most western nations in exchanging a high mortality in younger life for high morbidity in older age groups.

Table **16** shows the comparison of deaths by causes, in Canada for the years 1950 to 1952 and the Chart on p. 206, "Major Causes of Death", shows graphically the death rates for the major cause groups.

15.—Deaths and Rates per 100,000 Population, according to the

	International List No.		Cause of Death	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick	
	Abbreviated List	Detailed List		No.	Rate	No.	Rate	No.	Rate	No.	Rate
1	B 1	001-008	Tuberculosis of respiratory system	134	35·8	19	18·4	69	10·6	82	15·6
2	B 2	010–019	Tuberculosis, other forms	41	11·0	5	4·9	25	3·8	18	3·4
3	B 3	020–029	Syphilis and its sequelæ	6	1·6	1	1·0	10	1·5	13	2·5
4	B 4	040	Typhoid fever	1	0·3	—	—	1	0·2	1	0·2
5	B 5	043	Cholera	—	—	—	—	—	—	—	—
6	B 6	045–048	Dysentery, all forms	1	0·3	—	—	—	—	2	0·4
7	B 7	050–051	Scarlet fever and streptococcal sore throat	—	—	2	1·9	—	—	2	0·4
8	B 8	055	Diphtheria	—	—	—	—	1	0·2	—	—
9	B 9	056	Whooping cough	5	1·3	—	—	1	0·2	5	1·0
10	B10	057	Meningococcal infections	2	0·5	2	1·9	5	0·8	11	2·1
11	B11	058	Plague	—	—	—	—	—	—	—	—
12	B12	080	Acute poliomyelitis	—	—	2	1·9	6	0·9	11	2·1
13	B13	084	Smallpox	—	—	—	—	—	—	—	—
14	B14	085	Measles	13	3·5	4	3·9	9	1·4	5	1·0
15	B15	100–108	Typhus and other rickettsial diseases	—	—	—	—	—	—	—	—
16	B16	110–117	Malaria	—	—	—	—	1	0·2	—	—
17	B17	030–039, 041, 042, 044, 049, 052–054, 059–074, 081–083, 086–096, 120–138	All other diseases classified as infective and parasitic	7	1·9	1	1·0	12	1·8	9	1·7
18	B18	140–205	Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues	346	92·5	142	137·9	847	129·7	643	122·2
19		(140-200, 202, 203, 205)	Cancer, excluding Hodgkin's disease, leukæmia and aleukæmia	*341*	*91·2*	*134*	*130·1*	*825*	*126·3*	*612*	*116·3*
20		(201)	Hodgkin's disease	*1*	*0·3*	*1*	*1·0*	*6*	*0·9*	*3*	*0·6*
21		(204)	Leukæmia and aleukæmia	*4*	*1·1*	*7*	*6·8*	*16*	*2·5*	*28*	*5·3*
22	B19	210–239	Benign and unspecified neoplasms	12	3·2	4	3·9	14	2·1	15	2·9
23	B20	260	Diabetes mellitus	16	4·3	13	12·6	67	10·3	56	10·6
24	B21	290–293	Anæmias	11	2·9	2	1·9	24	3·7	21	4·0
25	B22	330–334	Vascular lesions affecting central nervous system	300	80·2	136	132·0	750	114·9	492	93·5
26	B23	340	Non-meningococcal meningitis	12	3·2	2	1·9	10	1·5	11	2·1
27	B24	400–402	Rheumatic fever	3	0·8	2	1·9	5	0·8	6	1·1
28	B25	410–416	Chronic rheumatic heart disease	39	10·4	5	4·9	83	12·7	38	7·2
29	B26	420–422	Arteriosclerotic and degenerative heart disease	293	78·3	210	203·9	1,369	209·6	1,057	201·0

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[1] Exclusive of the Territories.

[2] Less than 0·1 per 100,000 population.

International Abbreviated List of 50 Causes, by Province, 1952

Quebec		Ontario		Manitoba		Saskatchewan		Alberta		British Columbia		Canada[1]		
No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	
895	21·4	369	7·7	92	11·5	74	8·8	91	9·4	192	16·0	2,017	14·0	1
213	5·1	29	0·6	23	2·9	30	3·6	34	3·5	22	1·8	440	3·1	2
103	2·5	84	1·8	7	0·9	13	1·5	27	2·8	33	2·8	297	2·1	3
11	0·3	2	[2]	—	—	—	—	2	0·2	—	—	18	0·1	4
—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
18	0·4	18	0·4	3	0·4	1	0·1	5	0·5	2	0·2	50	0·3	6
14	0·3	10	0·2	1	0·1	2	0·2	2	0·2	8	0·7	41	0·3	7
19	0·5	4	0·1	—	—	—	—	1	0·1	1	0·1	26	0·2	8
75	1·8	13	0·3	9	1·1	21	2·5	8	0·8	5	0·4	142	1·0	9
32	0·8	18	0·4	1	0·1	7	0·8	2	0·2	7	0·6	87	0·6	10
—	—	—	—	—	—	—	—	—	—	—	—	—	—	11
12	0·3	46	1·0	25	3·1	90	10·7	79	8·1	40	3·3	311	2·2	12
—	—	—	—	—	—	—	—	—	—	—	—	—	—	13
133	3·2	17	0·4	15	1·9	21	2·5	7	0·7	12	1·0	236	1·6	14
—	—	1	[2]	—	—	—	—	1	0·1	—	—	2	[2]	15
—	—	1	[2]	—	—	—	—	1	0·1	—	—	3	[2]	16
118	2·8	106	2·2	18	2·3	24	2·8	20	2·1	21	1·8	336	2·3	17
5,048	120·9	6,630	139·1	1,005	125·9	961	114·0	1,072	110·5	1,895	158·2	18,589	129·0	18
4,825	*115·6*	*6,319*	*132·6*	*947*	*118·7*	*907*	*107·6*	*993*	*102·4*	*1,807*	*150·8*	*17,710*	*122·9*	19
64	*1·5*	*81*	*1·7*	*9*	*1·1*	*12*	*1·4*	*15*	*1·5*	*23*	*1·9*	*215*	*1·5*	20
159	*3·8*	*230*	*4·8*	*49*	*6·1*	*42*	*5·0*	*64*	*6·6*	*65*	*5·4*	*664*	*4·6*	21
93	2·2	119	2·5	20	2·5	25	3·0	27	2·8	44	3·7	373	2·6	22
531	12·7	529	11·1	73	9·1	84	10·0	104	10·7	104	8·7	1,577	10·9	23
124	3·0	129	2·7	25	3·1	28	3·3	14	1·4	26	2·2	404	2·8	24
2,393	57·3	5,964	125·1	782	98·0	649	77·0	727	74·9	1,155	96·4	13,348	92·7	25
123	2·9	50	1·0	10	1·3	16	1·9	17	1·8	15	1·3	266	1·8	26
159	3·8	65	1·4	7	0·9	7	0·8	17	1·8	17	1·4	288	2·0	27
367	8·8	591	12·4	75	9·4	117	13·9	112	11·5	176	14·7	1,603	11·1	28
6,857	164·3	13,942	292·5	1,698	212·8	1,736	205·9	1,770	182·5	3,478	290·3	32,410	225·0	29

15.—Deaths and Rates per 100,000 Population, according to the

	International List No.		Cause of Death	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick	
	Abbreviated List	Detailed List		No.	Rate	No.	Rate	No.	Rate	No.	Rate
30	B27	430–434	Other diseases of heart.....	90	24·1	16	15·5	123	18·8	94	17·9
31	B28	440–443	Hypertension with heart disease..................	67	17·9	35	34·0	261	40·0	157	29·8
32	B29	444–447	Hypertension without mention of heart............	39	10·4	10	9·7	61	9·3	31	5·9
33	B30	480–483	Influenza..................	39	10·4	5	4·9	40	6·1	27	5·1
34	B31	490–493	Pneumonia................	108	28·9	43	41·7	200	30·6	216	41·1
35	B32	500–502	Bronchitis................	21	5·6	2	1·9	27	4·1	15	2·9
36	B33	540, 541	Ulcer of stomach and duodenum..................	6	1·6	—	—	21	3·2	18	3·4
37	B34	550–553	Appendicitis..............	6	1·6	1	1·0	12	1·8	6	1·1
38	B35	560, 561, 570	Intestinal obstruction and hernia..................	13	3·5	4	3·9	28	4·3	27	5·1
39	B36	543 571, 572	Gastritis, duodenitis, enteritis and colitis, except diarrhœa of the newborn ..	57	15·2	3	2·9	26	4·0	56	10·6
40	B37	581	Cirrhosis of liver..........	4	1·1	2	1·9	24	3·7	20	3·8
41	B38	590–594	Nephritis and nephrosis....	34	9·1	22	21·4	90	13·8	74	14·1
42	B39	610	Hyperplasia of prostate....	15	4·0	11	10·7	30	4·6	35	6·7
43	B40	640–652, 660, 670–689	Complications of pregnancy, childbirth and the puerperium.................	25	6·7	4	3·9	14	2·1	19	3·6
44	B41	750–759	Congenital malformations..	71	19·0	16	15·5	107	16·4	97	18·4
45	B42	760–762	Birth injuries, post-natal asphyxia and atelectasis....	46	12·3	11	10·7	114	17·5	126	24·0
46	B43	763–768	Infections of the newborn...	23	6·1	3	2·9	23	3·5	36	6·8
47	B44	769–776	Other diseases peculiar to early infancy and immaturity (unqualified)	149	39·8	18	17·5	171	26·2	188	35·7
48	B45	780–795	Senility without mention of psychosis, ill-defined and unknown causes..........	348	93·0	21	20·4	127	19·4	221	42·0
49	B46	Residual	All other diseases..........	205	54·8	66	64·1	488	74·7	322	61·2
50	BE47	E810–E835	Motor-vehicle accidents....	25	6·7	26	25·2	118	18·1	139	26·4
51	BE48	E800–E802 E840–E962	All other accidents........	131	35·0	40	38·8	292	44·7	201	38·2
52	BE49	E963, E970–E979	Suicide and self-inflicted injury....................	8	2·1	5	4·9	42	6·4	17	3·2
53	BE50	E964, E965 E980–E999	Homicide and operations of war.....................	1	0·3	—	—	8	1·2	7	1·3
54			**Totals, All Causes**.......	**2,773**	**741·4**	**916**	889·3	**5,756**	881·5	**4,647**	883·5

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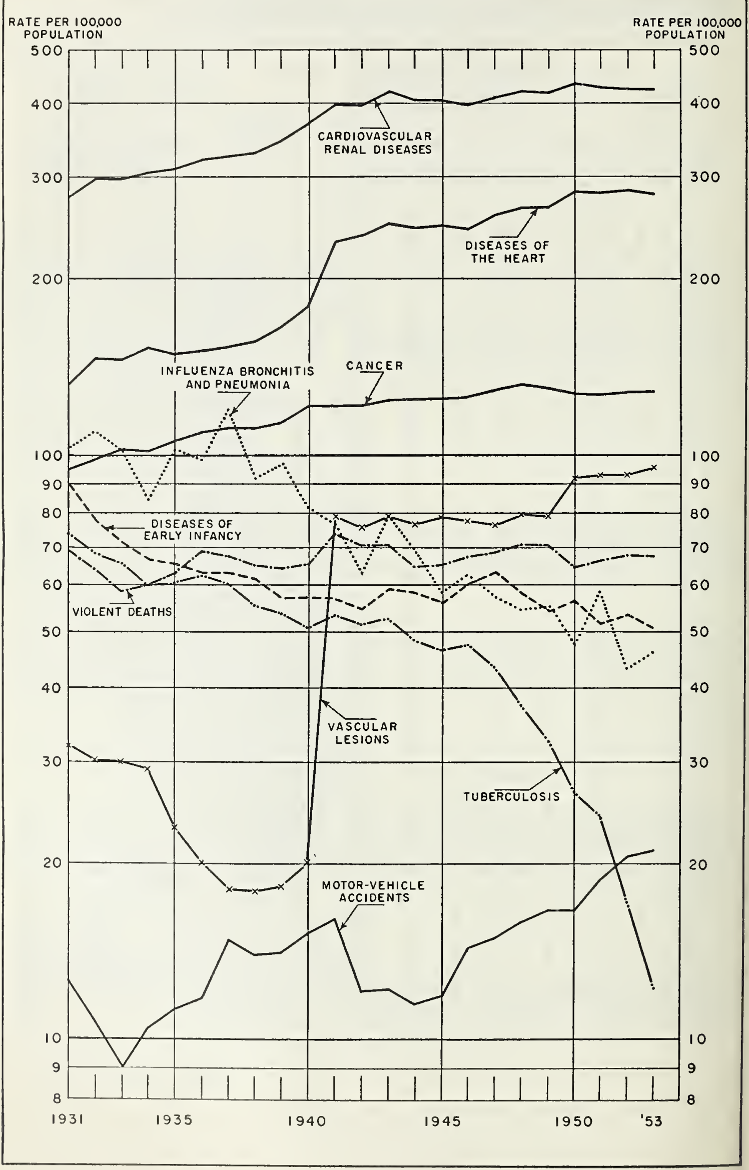
[1] Exclusive of the Territories.

International Abbreviated List of 50 Causes, by Province, 1952—concluded

Quebec		Ontario		Manitoba		Saskatchewan		Alberta		British Columbia		Canada[1]		
No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	
554	13·3	431	9·0	144	18·0	106	12·6	155	16·0	160	13·4	1,873	13·0	**30**
1,508	36·1	1,527	32·0	177	22·2	231	27·4	210	21·6	564	47·1	4,737	32·9	**31**
393	9·4	225	4·7	72	9·0	51	6·0	67	6·9	84	7·0	1,033	7·2	**32**
372	8·9	164	3·4	52	6·5	72	8·5	47	4·8	46	3·8	864	6·0	**33**
1,270	30·4	1,274	26·7	245	30·7	299	35·5	298	30·7	436	36·4	4,389	30·5	**34**
145	3·5	163	3·4	35	4·4	24	2·8	28	2·9	46	3·8	506	3·5	**35**
162	3·9	263	5·5	40	5·0	36	4·3	45	4·6	121	10·1	712	4·9	**36**
80	1·9	86	1·8	11	1·4	13	1·5	15	1·5	18	1·5	248	1·7	**37**
232	5·6	253	5·3	41	5·1	47	5·6	61	6·3	83	6·9	789	5·5	**38**
600	14·4	330	6·9	49	6·1	64	7·6	79	8·1	73	6·1	1,337	9·3	**39**
189	4·5	239	5·0	28	3·5	26	3·1	27	2·8	93	7·8	652	4·5	**40**
1,576	37·8	575	12·1	95	11·9	89	10·6	74	7·6	162	13·5	2,791	19·4	**41**
171	4·1	246	5·2	36	4·5	61	7·2	53	5·5	61	5·1	719	5·0	**42**
155	3·7	100	2·1	11	1·4	13	1·5	15	1·5	18	1·5	374	2·6	**43**
955	22·9	807	16·9	125	15·7	107	12·7	164	16·9	174	14·5	2,623	18·2	**44**
954	22·9	931	19·5	133	16·7	143	17·0	196	20·2	192	16·0	2,846	19·8	**45**
399	9·6	144	3·0	26	3·3	41	4·9	32	3·3	26	2·2	753	5·2	**46**
1,716	41·1	1,043	21·9	155	19·4	197	23·4	240	24·7	243	20·3	4,120	28·6	**47**
584	14·0	363	7·6	134	16·8	71	8·4	139	14·3	119	9·9	2,127	14·8	**48**
3,064	73·4	3,072	64·5	579	72·6	536	63·6	570	58·8	947	79·0	9,849	68·4	**49**
939	22·5	1,041	21·8	116	14·5	127	15·1	196	20·2	220	18·4	2,947	20·5	**50**
1,329	31·8	1,887	39·6	281	35·2	300	35·6	393	40·5	740	61·8	5,594	38·8	**51**
139	3·3	440	9·2	62	7·8	61	7·2	94	9·7	182	15·2	1,050	7·3	**52**
30	0·7	61	1·3	16	2·0	4	0·5	7	0·7	19	1·6	153	1·1	**53**
34,854	**835·0**	**44,402**	**931·6**	**6,552**	**821·1**	**6,625**	**785·9**	**7,345**	**757·2**	**12,080**	**1,008·3**	**125,950**	**874·3**	**54**



MAJOR CAUSES OF DEATH

16.—Deaths and Rates per 100,000 Population according to the International Abbreviated List of 50 Causes, 1950-52

(Exclusive of the Territories)

International List No.		Cause of Death	Number of Deaths			Rates per 100,000 Population		
Abbreviated List	Detailed List		1950	1951	1952	1950	1951	1952
B 1	001–008	Tuberculosis of respiratory system.	3,001	2,851	2,017	21·9	20·4	14·0
B 2	010–019	Tuberculosis, other forms..........	582	566	440	4·3	4·0	3·1
B 3	020–029	Syphilis and its sequelæ...........	369	301	297	2·7	2·2	2·1
B 4	040	Typhoid fever.....................	22	11	18	0·2	0·1	0·1
B 5	043	Cholera...........................	—	—	—	—	—	—
B 6	045–048	Dysentery, all forms...............	58	52	50	0·4	0·4	0·3
B 7	050, 051	Scarlet fever and streptococcal sore throat..........................	62	45	41	0·5	0·3	0·3
B 8	055	Diphtheria........................	52	37	26	0·4	0·3	0·2
B 9	056	Whooping cough....................	306	202	142	2·2	1·4	1·0
B10	057	Meningococcal infections...........	76	89	87	0·6	0·6	0·6
B11	058	Plague............................	—	—	—	—	—	—
B12	080	Acute poliomyelitis................	41	162	311	0·3	1·2	2·2
B13	084	Smallpox..........................	—	—	—	—	—	—
B14	085	Measles...........................	173	177	236	1·3	1·3	1·6
B15	100–108	Typhus and other rickettsial diseases............................	—	—	2	—	—	[1]
B16	110–117	Malaria...........................	—	1	3	—	[1]	[1]
B17	030-039, 041, 042, 044, 049, 052–054, 059–074, 081–083, 086–096, 120–138	All other diseases classified as infective and parasitic...........	313	282	336	2·3	2·0	2·3
B18	140–205	Malignant neoplasms, including neoplasms of lymphatic and hæmatopoietic tissues..................	17,478	17,821	18,589	127·7	127·4	129·0
	(140-200, 202, 203, 205)	Cancer, excluding Hodgkin's disease, leukæmia and aleukæmia...	*16,623*	*16,967*	*17,710*	*121·4*	*121·3*	*122·9*
	(201)	Hodgkin's disease.................	*219*	*216*	*215*	*1·6*	*1·5*	*1·5*
	(204)	Leukæmia and aleukæmia........	*636*	*638*	*664*	*4·6*	*4·6*	*4·6*
B19	210–239	Benign and unspecified neoplasms..	332	308	373	2·4	2·2	2·6
B20	260	Diabetes mellitus..................	1,544	1,584	1,577	11·3	11·3	10·9
B21	290–293	Anæmias..........................	496	446	404	3·6	3·2	2·8
B22	330–334	Vascular lesions affecting central nervous system..................	12,471	12,880	13,348	91·1	92·1	92·7
B23	340	Non-meningococcal meningitis.....	350	287	266	2·6	2·1	1·8
B24	400–402	Rheumatic fever...................	217	259	288	1·6	1·9	2·0
B25	410–416	Chronic rheumatic heart disease...	1,697	1,618	1,603	12·4	11·6	11·1
B26	420–422	Arteriosclerotic and degenerative heart disease....................	30,539	31,133	32,410	223·1	222·6	225·0
B27	430–434	Other diseases of heart............	1,943	1,836	1,873	14·2	13·1	13·0
B28	440–443	Hypertension with heart disease..	4,547	4,708	4,737	33·2	33·7	32·9
B29	444–447	Hypertension without mention of heart...........................	986	1,086	1,033	7·2	7·8	7·2
B30	480–483	Influenza.........................	942	2,572	864	6·9	18·4	6·0
B31	490–493	Pneumonia........................	4,601	4,664	4,389	33·6	33·4	30·5
B32	500–502	Bronchitis.........................	533	549	506	3·9	3·9	3·5
B33	540, 541	Ulcer of stomach and duodenum...	699	712	712	5·1	5·1	4·9
B34	550–553	Appendicitis.......................	340	260	248	2·5	1·9	1·7
B35	560, 561, 570	Intestinal obstruction and hernia...	876	759	789	6·4	5·4	5·5
B36	543, 571, 572	Gastritis, duodenitis, enteritis and colitis except diarrhœa of the newborn........................	1,314	1,233	1,337	9·6	8·8	9·3
B37	581	Cirrhosis of liver..................	615	607	652	4·5	4·3	4·5
B38	590–594	Nephritis and nephrosis...........	3,274	3,042	2,791	23·9	21·8	19·4
B39	610	Hyperplasia of prostate............	802	728	719	5·9	5·2	5·0
B40	640-652, 660, 670–689	Complications of pregnancy, childbirth and the puerperium........	420	405	374	3·1	2·9	2·6
B41	750–759	Congenital malformations..........	2,227	2,435	2,623	16·3	17·4	18·2
B42	760–762	Birth injuries, post-natal asphyxia and atelectasis..................	2,664	2,622	2,846	19·5	18·7	19·8
B43	763–768	Infections of the newborn..........	739	659	753	5·4	4·7	5·2

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[1] Less than 0·1 per 100,000 population.

16.—Deaths and Rates per 100,000 Population according to the International Abbreviated List of 50 Causes, 1950-52—concluded

(Exclusive of the Territories)

International List No. — Abbreviated List	International List No. — Detailed List	Cause of Death	Number of Deaths — 1950	Number of Deaths — 1951	Number of Deaths — 1952	Rates per 100,000 Population — 1950	Rates per 100,000 Population — 1951	Rates per 100,000 Population — 1952
B44	769–776	Other diseases peculiar to early infancy and immaturity (unqualified)	4,280	3,950	4,120	31·3	28·2	28·6
B45	780–795	Senility without mention of psychosis, ill-defined and unknown causes	2,614	2,236	2,127	19·1	16·0	14·8
B46	Residual	All other diseases	10,447	10,057	9,849	76·3	71·9	68·4
BE47	E810–E835	Motor-vehicle accidents	2,289	2,662	2,947	16·7	19·0	20·5
BE48	E800–E802 E840–E962	All other accidents	5,273	5,372	5,594	38·5	38·4	38·8
BE49	E963, E970–E979	Suicide and self-inflicted injury	1,060	1,033	1,050	7·7	7·4	7·3
BE50	E964, E965 E980–E999	Homicide and operations of war	135	155	153	1·0	1·1	1·1
		Totals, All Causes	**123,789**	**125,454**	**125,950**	**904·4**	**897·1**	**874·3**

Subsection 2.—Infant Mortality

International Comparisons.—The completeness of registration of live births and infant deaths varies from country to country and there is some evidence that the under-registration of deaths is proportionately greater for infants than for other ages. The reliability of the basic data should, therefore, be kept in mind when comparing the rates. Despite these variations, the Canadian rate as well as the rates for some of the provinces appear to be considerably higher than those for many other countries of the world.

17.—Infant Mortality per 1,000 Live Births in Selected Countries compared with Canada and the Provinces, 1952

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. Provisional data are used where certain final figures are not available.)

Country	Infant Mortality Rate	Country and Province	Infant Mortality Rate	Country	Infant Mortality Rate
Sweden	20	**Canada**	38	Ireland	41
New Zealand	22	British Columbia	29	Japan	48
Netherlands	23	Alberta	30	Western Germany	48
Australia	24	Manitoba	31	Belgium	50[1]
Norway	26[1]	Ontario	31	Austria	52
England and Wales	28	Prince Edward Island	31	Spain	61
Denmark	29	Nova Scotia	34	Italy	64
Switzerland	29	Saskatchewan	35	Ceylon	78
United States	29	New Brunswick	44	Venezuela	79
Finland	32	Newfoundland	46	Mexico	90
Scotland	35	Quebec	50	Portugal	94
Union of South Africa (Whites)	35	Northern Ireland	39	Yugoslavia	105
		France[2]	41	India[3]	116[1]
				Chile	134

[1] 1951. [2] Excludes infants who were born alive but died before registration of birth. [3] Registration area only.

Canadian Infant Mortality.—Table 1, pp. 187-189, shows the striking improvement that has taken place in the rate of infant mortality during the past 25 years. Of the 1,155,000 children born in 1950-52, approximately 45,000 died and 62,000 lived to their first birthday who would have died at the rate prevailing in the period 1926-30.

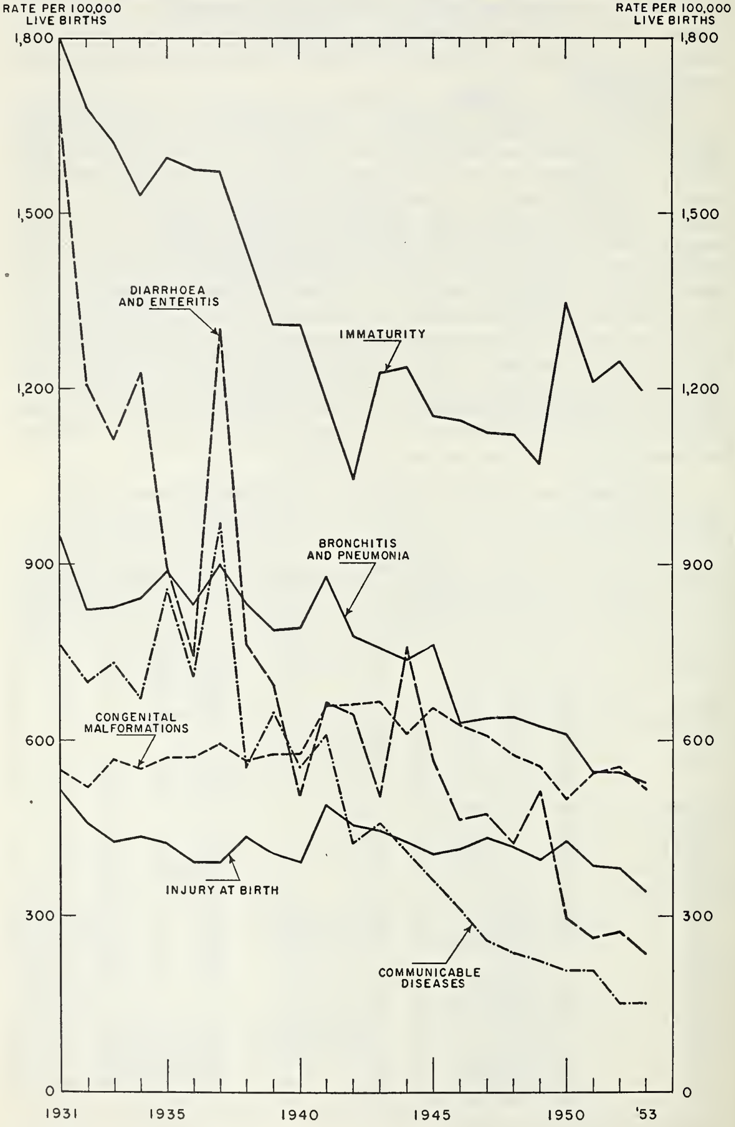
As illustrated in Table **18**, infant mortality of males is 25 to 30 p.c. higher than that of females for Canada as a whole, with wider variations for the individual provinces. As pointed out earlier, there were between 1,051 and 1,067 males born to every 1,000 females in the 1941-52 period. Because male infant mortality is higher, the excess of males is reduced drastically by the end of the first year. For example, in 1950-52, 593,810 male children were born compared with 559,889 female children, an excess of 33,921 or 6·6 p.c.; 25,882 male children died during their first year compared with 19,329 female children, that is, 6,553 more. The excess of males at one year of age was thus reduced to 27,368 or 5·6 p.c.

As indicated in Tables **1** and **18**, infant mortality rates vary considerably from province to province. One of the principal causes of these variations appears to be the different proportions of births that take place in hospital or under proper medical care (*see also* p. 193). Along with increased hospitalization has come better and more widespread pre-natal and post-natal care. Other factors have also been important, particularly the supervision of water supplies, improved sanitation, the pasteurization of milk and the use of antibiotics.

18.—Distribution of Infant Deaths, by Sex and Province, 1921-52

Province and Year	Males	Females	Rate per 1,000 Male Live Births	Rate per 1,000 Female Live Births
	No.	No.		
Newfoundland.......1950	408	350	60	55
1951	361	276	60	48
1952	318	254	49	42
P. E. Island.........1921	95	85	89	78
1931	78	50	78	57
1941	102	61	95	63
1951	60	30	44	23
1952	48	35	34	27
Nova Scotia.........1921	738	573	110	91
1931	510	404	86	71
1941	545	363	77	53
1951	344	250	39	30
1952	365	250	39	29
New Brunswick.....1921	740	559	125	101
1931	565	379	102	72
1941	515	421	83	69
1951	472	363	58	46
1952	433	296	51	36
Quebec..............1931	5,417	4,026	126	99
1941	3,916	2,854	85	66
1951	3,335	2,486	54	42
1952	3,664	2,668	56	44
Ontario.............1921	3,918	2,845	102	79
1931	2,744	2,089	77	62
1941	1,910	1,384	51	40
1951	2,010	1,535	34	28
1952	2,169	1,620	34	27
Manitoba............1921	868	665	92	74
1931	535	389	74	55
1941	447	341	59	47
1951	369	289	36	30
1952	364	283	34	28
Saskatchewan.......1921	1,048	766	90	70
1931	851	612	78	59
1941	531	415	56	46
1951	353	323	32	30
1952	431	356	37	33
Alberta.............1921	808	583	95	72
1931	675	522	76	63
1941	506	373	57	44
1951	531	358	39	27
1952	515	364	34	26
British Columbia....1921	343	259	62	51
1931	292	222	55	44
1941	316	236	41	32
1951	487	352	34	26
1952	480	390	31	27
Canada (exclusive of the Territories) **1921**[1]	**8,558**	**6,335**	**98**	**77**
1931	**11,667**	**8,693**	**94**	**74**
1941	**8,788**	**6,448**	**67**	**52**
1951	**8,322**	**6,262**	**43**	**34**
1952	**8,787**	**6,516**	**42**	**33**

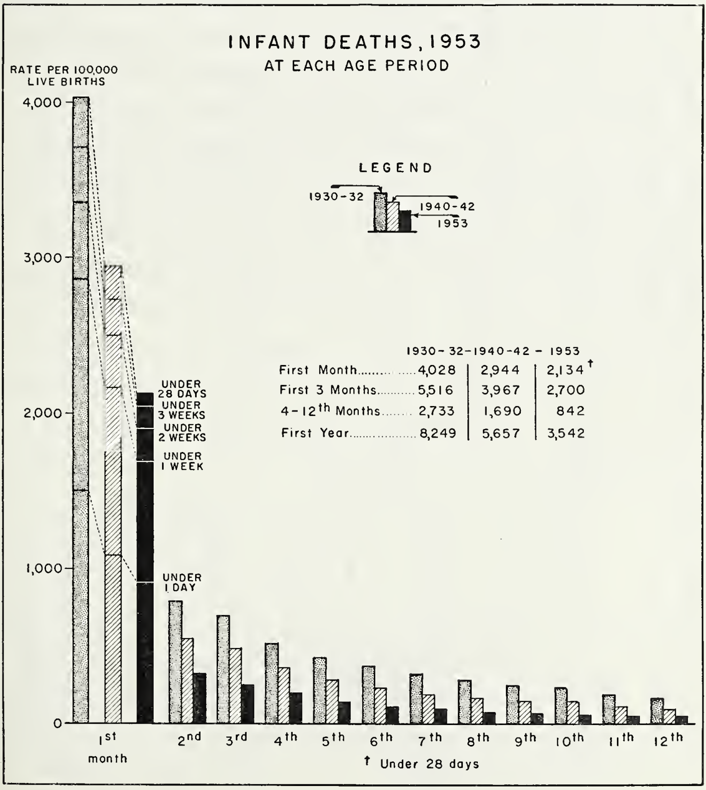
[1] Excludes the Province of Quebec.



LEADING CAUSES OF INFANT DEATHS

Infant Mortality in Urban Centres.—Because of the relatively small numbers of infant deaths in individual cities and towns, the rates for these centres usually vary widely from year to year. As is evident from Table **2** (pp. 189-191), many cities and towns have, however, maintained consistently low rates as compared with the national rate or the rate for the province in which they are situated.

Causes of Infant Deaths.—Of the 15,303 infant deaths in 1952, almost 15 p.c. were due to congenital malformations; 14 p.c. to immaturity; over 10 p.c. each to pneumonia among infants over four weeks of age and injury at birth; and about 8 p.c. to post-natal asphyxia and atelectasis. These specific causes accounted for 57 p.c. of the total infant deaths. The Chart, "Leading Causes of Infant Deaths", shows the relative importance of the major causes of infant death, and the Chart, "Infant Deaths", shows the comparative numbers of children dying at each month of age. Table **19** shows infant deaths by cause and province and Table **20** gives comparative totals for each cause for the years 1950-52.



INFANT DEATHS, 1953
AT EACH AGE PERIOD

	1930-32	1940-42	1953
First Month	4,028	2,944	2,134[†]
First 3 Months	5,516	3,967	2,700
4-12th Months	2,733	1,690	842
First Year	8,249	5,657	3,542

[†] Under 28 days

19.—Infant Mortality and Rates per 100,000 Live Births, by Selected Cause and by Province, 1952

International List No.	Cause of Death	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba		Saskatchewan		Alberta		British Columbia		Canada[1]	
		No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
001–019	Tuberculosis	2	16	—	—	1	6	—	—	18	14	4	3	2	10	7	31	4	14	3	10	41	10
020–029	Syphilis	1	8	—	—	—	—	—	—	3	2	1	1	—	—	—	—	1	3	1	3	7	2
045–048	Dysentery	1	8	—	—	—	—	2	12	12	9	3	2	1	5	—	—	5	17	—	—	24	6
050	Scarlet fever	—	—	—	—	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	2	[2]
052	Erysipelas	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
055	Diphtheria	—	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	1	[2]
056	Whooping cough	3	24	—	—	—	—	3	18	58	46	10	8	6	29	14	62	7	24	3	10	104	26
057	Meningococcal infections	1	8	1	37	3	17	3	18	16	13	7	6	—	—	6	27	2	7	1	3	40	10
085	Measles	6	48	2	74	2	11	1	6	36	28	6	5	5	24	9	40	1	3	5	17	73	18
140–239	Neoplasms	—	—	1	37	4	22	3	18	9	7	15	12	2	10	6	27	3	10	4	13	47	12
273	Diseases of thymus gland	4	32	2	74	3	17	5	30	21	17	13	10	5	24	2	9	5	17	5	17	65	16
340	Meningitis (non-meningococcal)	4	32	1	37	6	33	7	42	76	60	24	19	6	29	7	31	9	31	5	17	145	36
391, 392	Otitis media	—	—	—	—	1	6	1	6	223	176	11	9	2	10	2	9	4	14	7	23	251	62
470–475	Acute upper respiratory infections	6	48	1	37	1	6	3	18	32	25	12	10	2	10	4	18	5	17	7	23	73	18
480–483	Influenza	17	135	1	37	11	61	12	72	188	149	24	19	10	48	34	150	4	14	15	50	316	79
490–493	Pneumonia (4 weeks and over)	58	462	20	740	86	479	100	599	693	548	281	227	79	380	105	464	100	344	82	275	1,604	398
500–502	Bronchitis	6	48	—	—	9	50	4	24	29	23	20	16	9	43	6	27	9	31	10	34	102	25
560–570	Hernia and intestinal obstruction	3	24	—	—	5	28	2	12	44	35	27	22	7	34	7	31	5	17	7	23	107	27
571	Gastro-enteritis and colitis	45	358	3	111	13	72	44	264	440	348	190	153	33	159	33	146	46	158	30	101	877	218

572	Chronic enteritis, and ulcerative colitis	—	—	—	—	—	—	—	—	2	2	—	—	—	—	1	4	—	—	—	—	3	1
750–759	Congenital malformations	55	438	14	518	89	496	83	497	844	668	677	546	107	515	86	380	134	460	137	459	2,226	553
760, 761	Injury at birth	29	231	7	259	49	273	71	425	577	456	474	383	80	385	67	296	88	302	90	302	1,532	381
762	Post-natal asphyxia and atelectasis	17	135	4	148	65	362	55	330	377	298	457	369	53	255	76	336	108	371	102	342	1,314	326
763	Pneumonia of newborn (under 4 weeks)	10	80	3	111	12	67	21	126	257	203	87	70	15	72	36	159	23	79	19	64	483	120
764	Diarrhœa of newborn (under 4 weeks)	10	80	—	—	11	61	14	84	112	89	46	37	9	43	5	22	5	17	2	7	214	53
765–768	Other infections of the newborn	3	24	—	—	—	—	1	6	30	24	11	9	2	10	—	—	4	14	5	17	56	14
769	Antenatal toxæmia	5	40	1	37	6	33	7	42	71	56	53	43	3	14	12	53	8	27	5	17	171	42
770	Erythroblastosis	7	56	1	37	13	72	21	126	166	131	101	82	7	34	14	62	18	62	18	60	366	91
771	Hæmorrhagic disease of newborn	4	32	2	74	9	50	5	30	47	37	38	31	6	29	5	22	5	17	9	30	130	32
772	Nutritional maladjustment	11	88	—	—	12	67	17	102	64	51	30	24	9	43	6	27	4	14	8	27	161	40
773	Ill-defined diseases peculiar to early infancy	37	295	1	37	15	84	33	198	887	702	79	64	21	101	15	66	18	62	19	64	1,125	279
774–776	Immaturity	85	677	13	481	116	646	105	629	480	380	742	599	109	525	144	637	187	643	183	614	2,164	538
795	Ill-defined and unknown causes	71	565	1	37	12	67	54	324	48	38	38	31	15	72	9	40	13	45	14	47	275	68
E810-E825	Motor-vehicle traffic accidents	—	—	—	—	—	—	1	6	3	2	8	6	1	5	1	4	4	14	1	3	19	5
E900-E904	Accidental falls	—	—	—	—	—	—	—	—	4	3	4	3	—	—	—	—	2	7	—	—	10	2
E916	Accidents caused by fire	3	24	—	—	3	17	2	12	6	5	8	6	1	5	3	13	2	7	2	7	30	7
E921-E922	Inhalation and ingestion of food or other object	13	103	—	—	13	72	17	102	32	25	99	80	9	43	18	80	18	62	16	54	235	58
E924,E925	Accidental mechanical suffocation	10	80	1	37	7	39	4	24	17	13	54	44	5	24	11	49	6	21	16	54	131	33
	Other accidental and violent deaths	1	8	—	—	2	11	—	—	17	13	23	19	5	24	5	22	3	10	8	27	64	16
	All other causes	44	350	3	111	36	201	28	168	390	309	112	90	21	101	31	137	19	65	31	104	715	178
	Totals, All Causes	**572**	**4,554**	**83**	**3,071**	**615**	**3,426**	**729**	**4,368**	**6,332**	**5,009**	**3,789**	**3,058**	**647**	**3,114**	**787**	**3,482**	**879**	**3,020**	**870**	**2,917**	**15,303**	**3,802**

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[1] Exclusive of the Territories.

[2] Less than one per 100,000 live births.

20.—Infant Mortality and Rates per 100,000 Live Births, by Cause, 1950-52

(Exclusive of the Territories)

International List No.	Cause of Death	Number of Deaths			Rates per 100,000 Live Births		
		1950	1951	1952	1950	1951	1952
001–019	Tuberculosis	73	67	41	20	18	10
020–029	Syphilis	18	9	7	5	2	2
045–048	Dysentery	40	27	24	11	7	6
050	Scarlet fever	2	2	2	1	1	[1]
052	Erysipelas	—	4	—	—	1	—
055	Diphtheria	4	—	1	1	—	[1]
056	Whooping cough	236	139	104	64	37	26
057	Meningococcal infections	38	33	40	10	9	10
085	Measles	60	70	73	16	18	18
140–239	Neoplasms	42	41	47	11	11	12
273	Diseases of thymus gland	98	79	65	26	21	16
340	Meningitis (non-meningococcal)	164	132	145	44	35	36
391, 392	Otitis media	238	201	251	64	53	62
470–475	Acute upper respiratory infections	78	65	73	21	17	18
480–483	Influenza	301	440	316	81	116	79
490–493	Pneumonia (4 weeks and over)	1,701	1,527	1,604	458	402	398
500–502	Bronchitis	108	121	102	29	32	25
560–570	Hernia and intestinal obstruction	107	103	107	29	27	27
571	Gastro-enteritis and colitis	858	802	877	231	211	218
572	Chronic enteritis, and ulcerative colitis	5	4	3	1	1	1
750–759	Congenital malformations	1,856	2,063	2,226	500	543	553
760, 761	Injury at birth	1,587	1,461	1,532	428	384	381
762	Post-natal asphyxia and atelectasis	1,076	1,160	1,314	290	305	326
763	Pneumonia of newborn (under 4 weeks)	456	423	483	123	111	120
764	Diarrhœa of newborn (under 4 weeks)	232	185	214	63	49	53
765–768	Other infections of the newborn	51	51	56	14	13	14
769	Antenatal toxæmia	212	175	171	57	46	42
770	Erythroblastosis	299	336	366	81	88	91
771	Hæmorrhagic disease of newborn	103	105	130	28	28	32
772	Nutritional maladjustment	177	157	161	48	41	40
773	Ill-defined diseases peculiar to early infancy	1,210	1,059	1,125	326	279	279
774–776	Immaturity	2,279	2,117	2,164	614	557	538
795	Ill-defined and unknown causes	367	274	275	99	72	68
E810–E825	Motor-vehicle traffic accidents	11	12	19	3	3	5
E900–E904	Accidental falls	21	12	10	6	3	2
E916	Accidents caused by fire	29	28	30	8	7	7
E921, E922	Inhalation and ingestion of food or other object	221	223	235	60	59	58
E924, E925	Accidental mechanical suffocation	136	132	131	37	35	33
	Other accidental and violent deaths	60	54	64	16	14	16
	Other specified causes	770	691	715	208	182	178
	Totals, All Causes	**15,324**	**14,584**	**15,303**	**4,130**	**3,837**	**3,802**

[1] Less than one per 100,000 live births.

Subsection 3.—Maternal Mortality

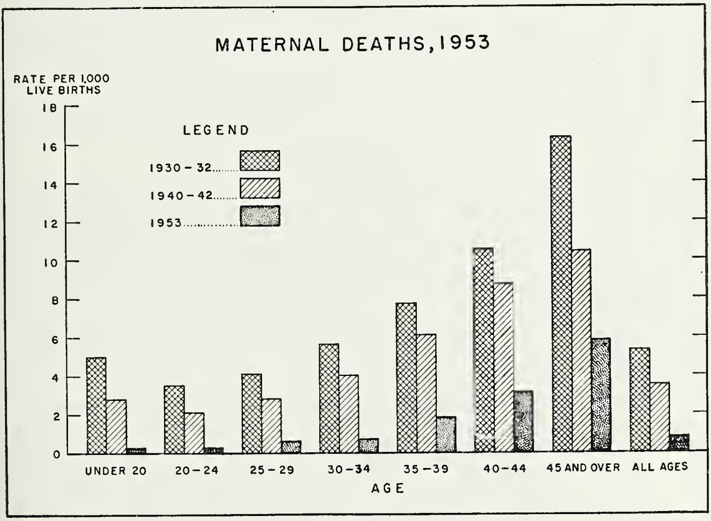
As indicated in Table 1, pp. 187-189, the number of mothers who die in pregnancy and childbirth has been greatly reduced during the past two decades. Although the number of births has been much greater in recent years, the number of maternal deaths has declined steadily since about 1930 (when there were 1,215 deaths and a rate of almost five deaths for every 1,000 live births) to 349 in 1952. Since 1945, the rate of maternal mortality has dropped below two per 1,000 live births and was under one per 1,000 live births in 1952. Mortality among unmarried mothers is higher than among married mothers.

Age at Death.—Table 21 shows the distribution of maternal deaths by age groups and average age at death. The latter is slightly more than two years higher than the average age of all mothers at the time of childbirth. The rates per 1,000 live births by age groups show that age is a most important factor in maternal mortality. Though all the rates are much lower than they used to be, the inequalities between the age groups remain (*see* Chart, "Maternal Deaths"). The rate at 30-34 years is more than twice as high as the rate at 20-24 years, and at 40-44 years it is over eight times as high. The higher rate for the "under 20" age group, compared with the age group 20-24, is owing to the high proportion of illegitimate children born to young mothers in the "under 20" group.

21.—Maternal Mortality and Rates per 1,000 Live Births, by Age Group, 1931, 1941 and 1952

(Exclusive of Newfoundland and the Territories)

Age Group	Maternal Deaths						Rates per 1,000 Live Births		
	1931		1941		1952		1931	1941	1952
	No.	p.c.	No.	p.c.	No.	p.c.			
Under 20 years...........	70	5·8	47	5·2	12	3·4	4·58	2·77	0·46
20 - 24 "	193	15·9	160	17·8	44	12·6	3·17	2·26	0·41
25 - 29 "	254	20·9	217	24·1	75	21·5	3·88	2·85	0·64
30 - 34 "	270	22·2	203	22·5	84	24·1	5·50	4·05	1·04
35 - 39 "	265	21·8	184	20·4	76	21·8	7·87	6·37	1·75
40 - 44 "	142	11·7	82	9·1	46	13·2	10·92	7·97	3·49
45 - 49 "	21	1·7	7	0·8	10	2·9	15·26	6·57	9·98
50 years or over...........	—	—	1	0·1	2	0·6	—	--	--
Totals, All Ages........	**1,215**	**100·0**	**901**	**100·0**	**349**	**100·0**	**5·05**	**3·53**	**0·89**
Average age at death.....	31·6		30·9		32·6		...	...	...



Causes of Maternal Deaths.—Tables **22** and **23** show, by cause, the numbers and rates of maternal deaths per 100,000 live births. Until a decade ago, puerperal sepsis and toxæmias of pregnancy were by far the most important causes. Since 1936, the rate for puerperal sepsis has been reduced by almost 95 p.c. owing in large measure to the use of sulpha and other antibiotics. Although there has been a reduction of over 70 p.c. since 1936 in the maternal death rate from toxæmias of pregnancy, this group still remains a major cause of maternal deaths, second only to complications of delivery.

22.—Maternal Mortality and Rates per 100,000 Live Births, by Cause and by Province, 1952

International List No.	Cause of Death	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba		Saskatchewan		Alberta		British Columbia		Canada[1]	
		No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
640, 641	Infections of the genito-urinary tract during pregnancy	—	—	—	—	—	—	1	6	1	1	—	—	—	—	—	—	1	3	—	—	3	1
642	Toxæmias of pregnancy	4	32	3	111	4	22	6	36	33	26	32	26	6	29	2	9	3	10	4	13	97	24
643	Placenta prævia noted before delivery	—	—	—	—	—	—	—	—	1	1	1	1	—	—	—	—	1	3	—	—	3	1
644	Other hæmorrhage of pregnancy	1	8	—	—	1	6	—	—	1	1	—	—	—	—	—	—	1	3	—	—	4	1
645	Ectopic pregnancy	—	—	—	—	—	—	1	6	4	3	5	4	1	5	—	—	—	—	2	7	13	3
646–649	Other complications of pregnancy	—	—	—	—	2	11	—	—	4	3	4	3	2	10	1	4	—	—	—	—	13	3
650, 652	Abortion without mention of sepsis	—	—	—	—	—	—	1	6	5	4	4	3	—	—	—	—	2	7	1	3	13	3
651	Abortion with sepsis	—	—	—	—	2	11	—	—	4	3	13	10	2	10	—	—	4	14	5	17	30	7
660	Delivery without complication	3	24	1	37	1	6	1	6	1	1	—	—	—	—	—	—	1	3	1	3	9	2
670	Delivery complicated by placenta prævia or antepartum hæmorrhage	3	24	—	—	2	11	1	6	19	15	7	6	—	—	1	4	—	—	1	3	34	8
671	Delivery complicated by retained placenta	1	8	—	—	—	—	1	6	2	2	4	3	—	—	1	4	1	3	—	—	10	2
672	Delivery complicated by other postpartum hæmorrhage	—	—	—	—	—	—	2	12	14	11	6	5	—	—	1	4	—	—	—	—	23	6
673, 674	Delivery complicated by abnormality of bony pelvis or malposition of fœtus	—	—	—	—	—	—	2	12	5	4	3	2	—	—	1	4	—	—	1	3	12	3
675	Delivery complicated by prolonged labour of other origin	2	16	—	—	—	—	—	—	8	6	1	1	—	—	1	4	—	—	—	—	12	3
676, 677	Delivery with laceration or other trauma	1	8	—	—	—	—	—	—	12	9	3	2	—	—	—	—	—	—	—	—	16	4
678	Delivery with other complications of childbirth	3	24	—	—	1	6	1	6	10	8	—	—	—	—	—	—	—	—	—	—	15	4
680	Puerperal urinary infection without other sepsis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
681	Sepsis of childbirth and the puerperium	1	8	—	—	—	—	—	—	3	2	3	2	—	—	1	4	—	—	2	7	10	2
682–684	Puerperal phlebitis, thrombosis, pyrexia, pulmonary embolism	1	8	—	—	1	6	1	6	14	11	6	5	—	—	4	18	—	—	1	3	28	7
685, 686	Puerperal eclampsia and toxæmia	2	16	—	—	—	—	—	—	7	6	2	2	—	—	—	—	1	3	—	—	12	3
687–689	Other and unspecified complications of the puerperium	3	24	—	—	—	—	1	6	7	6	6	5	—	—	—	—	—	—	—	—	17	4
	Totals, All Puerperal Causes	**25**	**199**	**4**	**148**	**14**	**78**	**19**	**114**	**155**	**123**	**100**	**81**	**11**	**53**	**13**	**58**	**15**	**52**	**18**	**60**	**374**	**93**

[1] Exclusive of the Territories.

23.—Maternal Mortality and Rates per 100,000 Live Births, by Cause, 1950-52

(Exclusive of the Territories)

International List No.	Cause of Death	Number of Deaths			Rate per 100,000 Live Births		
		1950	1951	1952	1950	1951	1952
640, 641	Infections of the genito-urinary tract during pregnancy	1	1	3	[1]	[1]	1
642	Toxæmias of pregnancy	90	111	97	24	29	24
643	Placenta prævia noted before delivery	11	4	3	3	1	1
644	Other hæmorrhage of pregnancy	5	3	4	1	1	1
645	Ectopic pregnancy	19	13	13	5	3	3
646–649	Other complications of pregnancy	9	16	13	2	4	3
650, 652	Abortion without mention of sepsis	24	22	13	6	6	3
651	Abortion with sepsis	26	29	30	7	8	7
660	Delivery without complication	7	6	9	2	2	2
670	Delivery complicated by placenta prævia or antepartum hæmorrhage	44	43	34	12	11	8
671	Delivery complicated by retained placenta	10	6	10	3	2	2
672	Delivery complicated by other postpartum hæmorrhage	48	38	23	13	10	6
673, 674	Delivery complicated by abnormality of bony pelvis or malposition of fœtus	14	13	12	4	3	3
675	Delivery complicated by prolonged labour of other origin	12	14	12	3	4	3
676, 677	Delivery with laceration or other trauma	9	15	16	2	4	4
678	Delivery with other complications of childbirth	14	13	15	4	3	4
680	Puerperal urinary infection without other sepsis	—	1	—	—	[1]	—
681	Sepsis of childbirth and the puerperium	12	13	10	3	3	2
682–684	Puerperal phlebitis, thrombosis, pyrexia, pulmonary embolism	26	25	28	7	7	7
685, 686	Puerperal eclampsia and toxæmia	23	9	12	6	2	3
687–689	Other and unspecified complications of the puerperium	16	10	17	4	3	4
	Totals, All Puerperal Causes	**420**	**405**	**374**	**113**	**107**	**93**

[1] Less than one per 100,000 live births.

Section 4.—Natural Increase

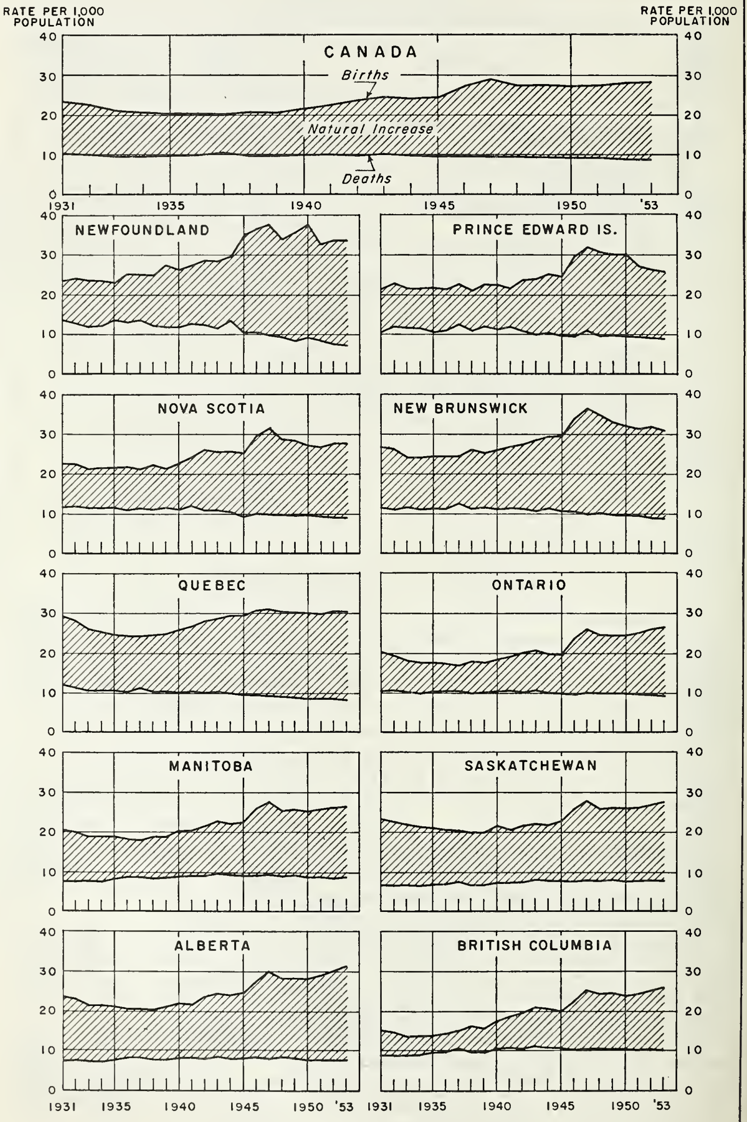
In 1926-30, the rate of natural increase in Canada (excess of births over deaths) was 13 per 1,000 population. Owing partly to the depression, the birth rate declined more than the death rate and the rate of natural increase fell to 9·7 in 1937. Since then the rate has increased to 12·6 in 1940-42, 14·6 in 1945, 17·6 in 1946 and 19·3 in 1947. The rates of 17·8 in 1948, 18·1 in 1949, 18·1 in 1950, 18·2 in 1951, and 19·2 in 1952 were lower owing to increases in total deaths in recent years.

Table 24 shows that the rates of natural increase in the provinces followed generally the rate for Canada as a whole. In earlier years, Saskatchewan and Quebec had the highest rates. The high rates in all the Prairie Provinces were owing partly to their relatively younger populations and consequent low death rates. In Quebec, on the other hand, the death rate in 1926-30 was high; it has declined steadily since. Owing to high birth rates, Newfoundland and New Brunswick have had the highest rates of natural increase in Canada in recent years. (*See* Chart, "Birth, Death and Natural Increase Rates", p. 218.)

The rates are generally higher for females than for males because death rates for males are higher than for females. In the western provinces particularly, the fact that the ratio of males to females in the total population is higher than in other parts of Canada tends to lower the rate of natural increase.

In a country such as Canada with a fairly young population and where immigration has been large, an excess of males is to be expected but the higher rate of natural increase for females may gradually reduce this excess. The trend is towards an eventual excess of females in the total population as there now is in most European countries—unless immigration raises the male ratio.

BIRTH, DEATH AND NATURAL INCREASE RATES



24.—Natural Increase and Rates per 1,000 Population, by Sex and Province, 1921-52

Province and Year		Excess of Births Over Deaths	Rate per 1,000 Population	Males		Females	
				Number	Rate per 1,000 Males	Number	Rate per 1,000 Females
Newfoundland	1951	8,734	24·2	4,369	23·6	4,365	24·8
	1952	9,788	26·2	4,942	25·7	4,846	26·7
Prince Edward Island	1921	947	10·7	454	10·1	493	11·3
	1931	967	10·9	517	11·4	450	10·6
	1941	915	9·6	483	9·8	432	9·4
	1951	1,747	17·9	872	17·4	875	18·2
	1952	1,787	17·3	902	17·2	885	17·5
Nova Scotia	1921	6,601	12·6	3,323	12·5	3,278	12·7
	1931	5,647	11·0	2,836	10·8	2,811	11·3
	1941	6,989	12·1	3,335	11·3	3,654	13·0
	1951	11,313	17·6	5,596	17·2	5,717	18·0
	1952	12,195	18·7	6,022	18·2	6,173	19·1
New Brunswick	1921	6,055	15·9	3,084	16·0	2,971	15·9
	1931	6,157	15·1	3,099	14·9	3,058	15·3
	1941	7,088	15·5	3,396	14·5	3,692	16·5
	1951	11,202	21·8	5,522	21·3	5,680	22·1
	1952	12,044	22·9	5,768	21·8	6,276	24·0
Quebec	1921	55,316	23·4	29,431	24·9	25,885	21·9
	1931	49,119	17·1	24,984	17·3	24,135	16·9
	1941	54,871	16·5	27,561	16·5	27,310	16·5
	1951	86,030	21·2	42,961	21·2	43,069	21·2
	1952	91,562	21·9	45,555	21·8	46,007	22·0
Ontario	1921	39,601	13·5	20,245	13·7	19,356	13·3
	1931	33,504	9·8	16,472	9·4	17,032	10·1
	1941	33,036	8·7	15,705	8·2	17,331	9·3
	1951	70,846	15·4	34,737	15·0	36,109	15·8
	1952	79,489	16·7	38,914	16·2	40,575	17·2
Manitoba	1921	13,090	21·5	6,491	20·2	6,599	22·8
	1931	9,057	12·9	4,239	11·5	4,818	14·5
	1941	8,317	11·4	3,834	10·1	4,483	12·7
	1951	13,207	17·0	6,388	16·2	6,819	17·9
	1952	14,225	17·8	6,713	16·5	7,512	19·1
Saskatchewan	1921	16,897	22·3	8,542	20·6	8,355	24·3
	1931	15,265	16·5	7,499	15·0	7,766	18·4
	1941	12,006	13·4	5,651	11·8	6,355	15·2
	1951	15,293	18·4	7,192	16·6	8,101	20·4
	1952	15,980	18·9	7,559	17·2	8,421	20·9
Alberta	1921	11,621	19·7	5,635	17·4	5,986	22·6
	1931	11,950	16·4	5,843	14·6	6,107	18·4
	1941	10,923	13·7	5,016	11·8	5,907	16·0
	1951	19,836	21·1	9,331	19·0	10,505	23·5
	1952	21,760	22·4	10,408	20·5	11,352	24·6
British Columbia	1921	6,445	12·3	2,949	10·1	3,496	15·1
	1931	4,290	6·2	1,604	4·2	2,686	8·7
	1941	6,533	8·0	2,342	5·4	4,191	10·9
	1951	16,439	14·1	7,107	11·9	9,332	16·4
	1952	17,747	14·8	7,971	13·0	9,776	21·2
Canada (exclusive of the Territories).	**1921**	**156,573**	**17·8**	**80,154**	**17·7**	**76,419**	**18·0**
	1931	**135,956**	**13·1**	**67,093**	**12·5**	**68,863**	**13·8**
	1941	**140,678**	**12·2**	**67,323**	**11·4**	**73,355**	**13·1**
	1951	**254,647**	**18·2**	**124,075**	**17·5**	**130,572**	**18·9**
	1952	**276,577**	**19·2**	**134,754**	**18·5**	**141,823**	**20·0**

Natural Increase in Urban Centres.—The classification of births and deaths by place of residence makes it possible to compile the natural increase in the population of urban centres; the figures are presented in Table **2**, pp. 189-191.

Section 5.—Marriages and Divorces

Subsection 1.—Marriages

International Comparisons.—Table **25** shows the marriage rates in Canada and the provinces in comparison with those of other countries.

25.—Marriage Rates per 1,000 Population in Selected Countries compared with Canada and the Provinces, 1952

(Source: *Monthly Bulletin of Statistics of the United Nations* and other official publications. Provisional data are used where certain final figures are not available.)

Country or Province	Marriage Rate	Country or Province	Marriage Rate	Country	Marriage Rate
Yugoslavia	10·5	**Canada**—concluded		Japan	7·9
Union of South Africa (Whites)	10·2[1]	New Brunswick	8·1	Portugal	7·8
United States	10·0	Newfoundland	7·3	Switzerland	7·8
Western Germany	9·4	Prince Edward Island	6·0	Belgium	7·7
Canada	8·9	Australia	8·6	Spain	7·7
Alberta	9·8	New Zealand	8·6	Sweden	7·4
Ontario	9·5	Netherlands	8·4	France	7·3
British Columbia	9·2	Austria	8·2	Italy	7·0
Manitoba	8·9	Denmark	8·2	Northern Ireland	6·8
Quebec	8·5	Norway	8·2	Ceylon	6·6
Nova Scotia	8·3	Chile	8·1	Mexico	6·1
Saskatchewan	8·2	Scotland	8·0	Ireland	5·3
		England and Wales	7·9	Venezuela	4·8
		Finland	7·9	Peru	2·9

[1] 1951.

As a rule, marriage rates vary with the level of economic prosperity. In Canada, England and the United States, the number of marriages was exceptionally high in 1940-42, decreased in 1943 and 1944 but increased in 1945 and 1946, reaching peak rates in the immediate post-war years.

Canadian Marriages.—Table **26** shows the number of marriages and the marriage rates per 1,000 population in Canada and the provinces. Percentages of brides and bridegrooms, according to place of birth, are also given. In 1952, for the country as a whole, about 84 p.c. of the grooms were born in Canada—69 p.c. in the province in which they were married. Almost 88 p.c. of the brides were born in Canada—75 p.c. in the province in which they were married. However, there are wide variations from this pattern as between provinces; as might be expected, in the older Atlantic Provinces and Quebec there is a greater tendency to marry native, or native and province-born partners than in the other provinces.

26.—Marriages and Marriage Rates, by Province, with Percentage Distribution of Bridegrooms and Brides by Nativity, 1921-52

Province and Year		Total Marriages	Rate per 1,000 Population	Born in Province Where Married		Born in Other Provinces		Born Outside Canada	
				Grooms	Brides	Grooms	Brides	Grooms	Brides
		No.		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland	1951	2,517	7·0	85·2[1]	96·7[1]	2·4[1]	1·9[1]	12·4[1]	1·4[1]
	1952	2,730	7·3	87·5[1]	97·0[1]	2·1[1]	1·0[1]	10·3[1]	2·1[1]
Prince Edward Island	1921	518	5·8	92·3	94·6	5·0	1·9	2·7	3·5
	1931	490	5·6	89·4	91·8	5·1	4·1	5·5	4·1
	1941	673	7·1	78·8	86·6	15·0	9·4	6·2	4·0
	1951	583	5·9	82·3	91·1	12·9	6·0	4·8	2·9
	1952	613	6·0	81·4	91·5	13·9	5·4	4·7	3·1

For footnote, *see* end of table.

26.—Marriages and Marriage Rates, by Province, with Percentage Distribution of Bridegrooms and Brides by Nativity, 1921-52—concluded

Province and Year		Total Marriages	Rate per 1,000 Population	Born in Province Where Married		Born in Other Provinces		Born Outside Canada	
				Grooms	Brides	Grooms	Brides	Grooms	Brides
		No.		p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Nova Scotia	1921	3,550	6·8	76·3	81·3	6·4	4·5	17·3	14·2
	1931	3,394	6·6	80·3	86·7	5·4	3·6	14·3	9·7
	1941	6,596	11·4	73·2	83·8	16·8	9·5	10·0	6·7
	1951	5,094	7·9	78·2	86·7	15·9	9·0	6·0	4·3
	1952	5,390	8·3	77·2	86·3	16·5	10·0	6·3	3·7
New Brunswick	1921	3,173	8·4	73·4	78·0	10·1	8·4	16·5	13·6
	1931	2,544	6·2	77·7	81·8	10·1	9·2	12·2	9·0
	1941	4,941	10·8	78·5	84·4	13·3	9·7	8·2	5·9
	1951	4,386	8·5	80·0	86·9	10·1	6·7	9·8	6·4
	1952	4,276	8·1	78·7	85·2	10·7	7·5	10·6	7·3
Quebec	1931	16,783	5·8	79·7	83·4	4·2	3·7	16·0	13·0
	1941	32,782	9·8	86·1	89·3	6·7	5·9	7·2	4·8
	1951	35,704	8·8	86·7	89·5	6·1	5·5	7·2	5·0
	1952	35,374	8·5	84·9	87·9	6·1	5·6	9·1	6·4
Ontario	1921	24,871	8·5	63·6	66·7	5·6	4·7	30·8	28·6
	1931	23,771	6·9	57·4	63·4	7·7	7·7	34·9	28·8
	1941	43,270	11·4	89·2	89·0	4·2	4·5	6·7	6·5
	1951	45,198	9·8	65·9	72·4	14·6	12·2	19·5	15·4
	1952	45,251	9·5	63·6	70·0	14·4	12·2	22·0	17·8
Manitoba	1921	5,310	8·7	26·4	37·2	18·1	14·1	55·5	48·7
	1931	4,888	7·0	41·6	55·7	10·9	9·2	47·5	35·1
	1941	8,305	11·4	63·0	73·7	17·4	15·0	19·6	11·4
	1951	7,366	9·5	67·9	75·1	15·4	13·3	16·8	11·6
	1952	7,128	8·9	64·7	74·3	18·1	13·8	17·3	11·9
Saskatchewan	1921	5,101	6·7	7·1	15·6	31·4	28·1	61·5	56·3
	1931	5,700	6·2	27·6	48·3	22·5	16·9	49·9	34·7
	1941	7,036	7·9	64·7	79·1	16·1	10·0	19·1	10·9
	1951	6,805	8·2	78·3	86·4	10·7	6·4	11·1	7·2
	1952	6,944	8·2	77·6	87·4	12·0	5·9	10·4	6·6
Alberta	1921	4,661	7·9	7·0	14·2	26·2	25·1	66·8	60·7
	1931	5,142	7·0	22·1	38·5	19·4	17·6	58·5	43·9
	1941	8,470	10·6	50·0	63·4	23·9	19·9	26·2	16·8
	1951	9,305	9·9	56·0	67·4	25·7	19·6	18·3	13·0
	1952	9,514	9·8	53·4	65·2	26·0	19·8	20·5	15·0
British Columbia	1921	3,889	7·4	13·7	18·3	22·6	20·5	63·7	61·2
	1931	3,879	5·6	22·2	30·6	21·1	24·7	56·7	44·7
	1941	9,769	11·9	35·9	43·5	35·6	37·1	28·5	19·4
	1951	11,272	9·7	35·5	41·6	43·1	43·0	21·3	15·5
	1952	11,081	9·2	34·9	40·0	41·6	42·4	23·4	17·5
Canada (exclusive of the Territories).	**1921**[2]	**51,073**	**8·0**	**46·9**	**52·0**	**13·0**	**11·3**	**40·1**	**36·7**
	1931	**66,591**	**6·4**	**56·7**	**64·9**	**10·0**	**9·2**	**33·3**	**26·0**
	1941	**121,842**	**10·6**	**76·8**	**81·5**	**11·4**	**10·1**	**11·7**	**8·4**
	1951	**128,230**	**9·2**	**70·5**[1]	**76·5**[1]	**15·1**[1]	**12·8**[1]	**14·5**[1]	**10·6**[1]
	1952	**128,301**	**8·9**	**68·7**[1]	**75·0**[1]	**15·1**[1]	**12·8**[1]	**16·2**[1]	**12·2**[1]

[1] Excludes "not stated" birthplace.

[2] Excludes the Province of Quebec.

Age and Marital Status of Bridegrooms and Brides.—Over 91 p.c. of the marriages in 1952 were between persons who had not previously been married; 5 p.c. of the brides and grooms had been widowed, and more than 3 p.c. of the marriages were of divorced persons. The average age at marriage of bachelors is lower than 27 years and that of spinsters lower than 24. The average age of widowers and widows at the time of re-marriage is double that of bachelors and spinsters. Nine out of ten spinsters married in 1952 were under 30 years of age—7 out of 10 under 25 years—and 8 out of 10 bachelors were under 30 and about one-half of the total were under 25 years of age as shown in Table 27.

27.—Numbers and Percentages of Bridegrooms and Brides, by Age and Marital Status, 1952

(Exclusive of the Territories)

Age Group	BRIDEGROOMS							
	Numbers				Percentages			
	Bachelors	Widowers	Divorced	Total	Bachelors	Widowers	Divorced	Total
Under 20 years	6,562	—	1	6,563	5·6	—	- -	5·1
20 — 24 "	54,834	31	114	54,979	46·8	0·5	2·5	42·9
25 — 29 "	33,910	205	706	34,821	28·9	3·2	15·4	27·1
30 — 34 "	11,912	352	1,007	13,271	10·2	5·4	22·0	10·3
35 — 39 "	4,935	506	984	6,425	4·2	7·8	21·5	5·0
40 — 44 "	2,421	609	724	3,754	2·1	9·4	15·8	2·9
45 — 49 "	1,223	703	515	2,441	1·0	10·8	11·2	1·9
50 — 54 "	676	753	266	1,695	0·6	11·6	5·8	1·3
55 — 59 "	383	843	166	1,392	0·3	13·0	3·6	1·1
60 — 64 "	178	859	66	1,103	0·2	13·2	1·4	0·9
65 years or over	171	1,644	32	1,847	0·1	25·3	0·7	1·4
Totals, Stated Ages	**117,205**	**6,505**	**4,581**	**128,291**	**100·0**	**100·0**	**100·0**	**100·0**
Ages not stated	10	—	—	10	...	...	...	...
Totals, All Ages	**117,215**	**6,505**	**4,581**	**128,301**	**91·4**	**5·1**	**3·6**	**100·0**
Average ages	26·5	54·2	38·6	28·3	...	...	...	...
	BRIDES							
	Numbers				Percentages			
	Spinsters	Widows	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 20 years	31,596	10	11	31,617	26·9	0·2	0·3	24·6
20 — 24 "	55,123	145	381	55,649	47·0	2·2	8·7	43·4
25 — 29 "	18,765	433	1,018	20,216	16·0	6·6	23·2	15·8
30 — 34 "	6,313	727	1,065	8,105	5·4	11·1	24·2	6·3
35 — 39 "	2,795	779	818	4,392	2·4	11·9	18·6	3·4
40 — 44 "	1,372	829	544	2,745	1·2	12·7	12·4	2·1
45 — 49 "	691	871	316	1,878	0·6	13·3	7·2	1·5
50 — 54 "	358	742	143	1,243	0·3	11·3	3·3	1·0
55 — 59 "	185	687	65	937	0·2	10·5	1·5	0·7
60 — 64 "	90	561	18	669	0·1	8·6	0·4	0·5
65 years or over	67	756	13	836	0·1	11·6	0·3	0·7
Totals, Stated Ages	**117,355**	**6,540**	**4,392**	**128,287**	**100·0**	**100·0**	**100·0**	**100·0**
Ages not stated	14	—	—	14	...	...	...	...
Totals, All Ages	**117,369**	**6,540**	**4,392**	**128,301**	**91·5**	**5·1**	**3·4**	**100·0**
Average ages	23·7	47·6	34·9	25·3	...	...	...	...

Religious Denominations of Brides and Bridegrooms.—The distribution of brides and bridegrooms by religious denominations is roughly the same as that for the population as a whole. Table **28** shows the very strong influence that religion has on marriage. About 71 p.c. of all marriages are between persons of the same religious denomination; among those of Jewish faith, it was 94 p.c. in 1952; among Roman Catholics 89 p.c.; United Church 62 p.c.; and Eastern Orthodox 58 p.c.

28.—Marriages, by Religious Denominations of Contracting Parties, 1952

(Exclusive of the Territories)

Denomination of Bridegroom	Denomination of Bride										Total Marriages	Percentage
	Church of England	Baptist	Eastern Orthodox	Jewish	Lutheran	Presbyterian	Roman Catholic[1]	United Church	Other Sects	Not Stated		
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	
Church of England.......	8,414	659	94	8	371	879	1,785	3,780	536	3	16,529	12·9
Baptist..........	655	2,057	21	1	148	211	420	844	243	2	4,602	3·6
Eastern Orthodox	122	22	1,135	1	83	31	412	189	70	—	2,065	1·6
Jewish..........	31	3	2	1,778	8	8	50	28	25	—	1,933	1·5
Lutheran........	469	142	59	1	2,876	130	659	773	280	—	5,389	4·2
Presbyterian....	1,062	263	39	6	168	2,115	630	1,374	214	—	5,871	4·6
Roman Catholic[1]	1,733	358	327	23	722	479	51,589	2,014	730	5	57,980	45·2
United Church..	3,594	857	141	12	661	1,128	1,965	15,383	784	6	24,531	19·1
Other sects......	679	302	55	15	323	204	941	983	5,859	2	9,363	7·3
Not stated......	10	4	—	—	4	—	6	1	3	10	38	...
Totals.........	**16,769**	**4,667**	**1,873**	**1,845**	**5,364**	**5,185**	**58,457**	**25,369**	**8,744**	**28**	**128,301**	**100·0**
Percentages......	13·1	3·6	1·5	1·4	4·2	4·0	45·6	19·8	6·8	--	100·0	71·1[2]

[1] Includes Greek Catholic.

[2] Percentage of marriages between contracting parties of the same religious denomination.

Subsection 2.—Dissolutions of Marriage (Divorces)

For many years after Confederation, the number of divorces granted in Canada was small. There were fewer than 20 divorces in every year before 1900, 21 in 1903, 51 in 1909 and 60 in 1913. These numbers represent less than one per 1,000 of the yearly number of marriages.

After the end of World War I in 1918 the number of divorces increased. The generally unsettled conditions and the long separation of men on Active Service from their wives may have contributed to this increase. Changes in law and procedure may also have been a further factor—at present, Quebec and Newfoundland are the only provinces in which applicants for divorce must secure a private Act of Parliament. The number of divorces increased from 11 in 1900 to a peak of 8,199 in 1947, declining gradually after that year until in 1951 they numbered 5,263. The number rose again to 5,634 in 1952 and 6,055 in 1953.

29.—Dissolutions of Marriage (Divorces), by Province, 1900-53

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Northwest Territories		B.C.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.		No.	No.
1900.....	..	—	1	1	1	2	1	1		4	11
1901.....	..	—	10	—	—	2	—	—		7	19
1902.....	..	—	9	1	—	2	—	—		3	15
1903.....	..	—	8	4	1	2	1	1		4	21
1904.....	..	—	6	2	1	5	—	—		5	19
1905.....	..	—	6	2	3	2	2	2		18	35
								Sask.	Alta.		
1906.....	..	—	5	1	3	10	—	—	1	17	37
1907.....	..	—	8	3	1	3	1	—	—	9	25
1908.....	..	—	5	5	—	8	—	—	—	12	30
1909.....	..	—	8	5	4	8	2	1	1	22	51
1910.....	..	—	13	6	2	14	3	1	—	12	51
1911.....	..	—	10	6	4	13	3	—	2	19	57
1912.....	..	—	4	4	3	9	1	1	2	11	35
1913.....	..	1	—	4	4	20	6	1	4	20	60
1914.....	..	—	10	12	7	18	2	2	4	15	70
1915.....	..	—	13	6	3	10	1	1	3	16	53
1916.....	..	—	14	11	1	18	2	2	1	18	67
1917.....	..	—	8	6	4	10	—	1	2	23	54
1918.....	..	—	24	10	2	10	—	1	2	65	114
1919.....	..	—	36	13	4	46	88	3	36	147	373
1920.....	..	—	45	15	9	89	42	20	112	136	468
1921.....	..	—	41	13	10	96	122	59	89	128	558
1922.....	..	—	35	12	6	91	97	35	129	138	543
1923.....	..	—	22	19	10	102	81	44	88	139	505
1924.....	..	—	42	15	13	113	77	26	118	136	540
1925.....	..	—	30	15	13	119	79	43	101	150	550
1926.....	..	—	19	12	10	111	85	50	154	167	608
1927.....	..	—	29	17	13	181	101	62	148	197	748
1928.....	..	—	28	13	24	213	79	57	173	203	790
1929.....	..	—	30	21	30	207	89	71	147	222	817
1930.....	..	—	19	27	41	204	114	64	151	255	875
1931.....	..	1	36	20	38	91	94	55	157	208	700
1932.....	..	—	35	26	27	343	114	66	150	245	1,006
1933.....	..	—	27	12	24	307	116	48	138	258	930
1934.....	..	—	33	17	38	365	126	67	170	306	1,122
1935.....	..	2	52	36	28	491	145	68	225	384	1,431
1936.....	..	—	41	38	40	519	179	84	218	451	1,570
1937.....	..	2	36	53	43	607	200	112	259	520	1,832
1938.....	..	2	51	39	83	824	205	126	271	625	2,226
1939.....	..	—	64	40	50	747	181	133	272	581	2,068
1940.....	..	—	60	52	62	916	206	125	274	674	2,369
1941.....	..	1	68	87	48	949	242	146	311	609	2,461
1942.....	..	2	70	69	71	1,185	284	209	375	824	3,089
1943.....	..	2	73	114	90	1,243	277	174	413	877	3,263
1944.....	..	3	93	78[1]	108	1,471	316	226	484	1,009	3,788
1945.....	..	2	158	171[1]	177	1,940	405	282	575	1,366	5,076
1946.....	..	4	260	382	290	2,639	636	505	962	2,005	7,683
1947.....	..	18	207	236	348	3,509	665	509	881	1,826	8,199
1948.....	..	49	78[2]	211	292	3,107	477	333	651	1,683	6,881
1949.....	..	20	181[2]	202	350	2,396	411	289	594	1,491	5,934
1950.....	5	13	199	194	234	2,228	309	280	534	1,377	5,373
1951.....	4	10	187	156	289	2,102	361	226	589	1,339	5,263
1952.....	3	9	188	200	309	2,202	338	223	630	1,532	5,634
1953p....	9	15	185	181	273	2,719	374	218	603	1,478	6,055

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[1] No fall term of court held in 1944; cases held over till January 1945. [2] By a new rule adopted in August 1948, a *decree nisi* became absolute at the end of three months and as a result a number of divorces did not become effective until the following year.

Section 6.—Vital Statistics of the Yukon Territory and the Northwest Territories

The vital statistics of Yukon Territory and the Northwest Territories have been collected since 1924. These statistics are not presented with those of the ten provinces in the tables of this Chapter because the figures for some of the early years are not considered complete in that the personal particulars frequently are not available, the small and varying population of each year is not accurately known and, as some areas are accessible only during the summer months, complete returns are not available sufficiently early in the calendar year for inclusion in the national totals for routine publication. A summary of the principal vital statistics for these Territories is presented in Table **30**.

30.—Vital Statistics of the Yukon and Northwest Territories, 1926-52

Note.—Figures for 1944-52 are by place of residence; for previous years by place of occurrence.

Year	Yukon Territory			Northwest Territories		
	Births	Marriages	Deaths	Births	Marriages	Deaths
	No.	No.	No.	No.	No.	No.
Av. 1926-30	33	14	54	158	24	185
" 1931-35	49	24	61	190	41	137
" 1936-40	67	36	72	228	72	177
" 1941-45	105	60	96	383	95	332
" 1946-50	254	73	91	626	139	372
1941	72	36	67	314	82	306
1942	96	36	108	369	109	222
1943	99	67	120	403	94	304
1944	136	94	100	316	66	349
1945	123	69	87	511	122	478
1946	146	66	80	593	177	347
1947	224	61	77	625	111	376
1948	274	77	112	645	117	370
1949	309	76	86	644	134	434
1950	316	84	99	622	154	332
1951	342	68	85	649	110	284
1952	390	73	94	642	100	341

Section 7.—Canadian Life Tables

Three official life tables for Canada have been published: the first was calculated on the basis of the deaths of 1930-32 and the census population of 1931; the second on the basis of the deaths of 1940-42 and the census population of 1941 and the third was based on the Census of 1951 and deaths during 1950-52. In addition, tables have been computed for Canada as a whole for the years 1945 and 1947 based on estimated populations by sex and age and the deaths recorded as having occurred during those years. The life table values for 1951 are given in abbreviated form in Table **31**.

Life tables give a summary of the health and general conditions of survival of the population in a conventional, standard form. A hypothetical number (100,000) of births of each sex is assumed as a starting point. The life tables show how, on the basis of the mortality rates at each age in the given years, these 100,000 of each sex are reduced in number by death. For example, during the year 1951, of 100,000 males born, 4,325 died in their first year, so that 95,675 survived to one year of age; 326 died in their second year, so that 95,349 survived to two years of age; and so on. At 100 years of age, only 90 of the original 100,000 would have survived. The probability of death at each age is the ratio between the number of deaths and the population at each age. Finally, the expectation of life is the average number of years which a person might expect to live if the mortality rates in the given years remained constant.

31.—Canadian Life Table, 1951

Age	Males				Females			
	Number Living at Each Age	Number Dying Between Each Age and the Next	Probability of Dying Before Reaching Next Birthday	Expectation of Life	Number Living at Each Age	Number Dying Between Each Age and the Next	Probability of Dying Before Reaching Next Birthday	Expectation of Life
At birth..........	100,000	4,325	·04325	66·33	100,000	3,423	·03423	70·83
1 year...........	95,675	326	·00341	68·33	96,577	288	·00299	72·33
2 years..........	95,349	172	·00180	67·56	96,289	148	·00154	71·55
3 "	95,177	151	·00159	66·68	96,141	110	·00114	70·66
4 "	95,026	112	·00118	65·79	96,031	88	·00092	69·74
5 "	94,914	434	·00101	64·86	95,943	318	·00079	68·80
10 "	94,480	397	·00077	60·15	95,625	262	·00052	64·02
15 "	94,083	646	·00112	55·39	95,363	371	·00067	59·19
20 "	93,437	851	·00172	50·76	94,992	465	·00091	54·41
25 "	92,586	834	·00182	46·20	94,527	534	·00106	49·67
30 "	91,752	928	·00189	41·60	93,993	682	·00129	44·94
35 "	90,824	1,175	·00227	37·00	93,311	957	·00177	40·24
40 "	89,649	1,772	·00328	32·45	92,354	1,395	·00257	35·63
45 "	87,877	2,793	·00524	28·05	90,959	2,048	·00387	31·14
50 "	85,084	4,322	·00853	23·88	88,911	2,884	·00560	26·80
55 "	80,762	6,318	·01348	20·02	86,027	4,238	·00834	22·61
60 "	74,444	8,629	·02071	16·49	81,789	6,264	·01308	18·64
65 "	65,815	10,795	·03004	13·31	75,525	8,949	·02040	14·97
70 "	55,020	13,185	·04435	10·41	66,576	12,626	·03308	11·62
75 "	41,835	14,842	·06938	7·89	53,950	16,238	·05567	8·73
80 "	26,993	13,483	·10846	5·84	37,712	16,944	·09222	6·38
85 "	13,510	8,843	·16353	4·27	20,768	12,831	·14637	4·57
90 "	4,667	3,718	·23667	3·10	7,937	6,181	·22183	3·24
95 "	949	895	·32997	2·24	1,756	1,585	·32229	2·27
100 "	90		·44550	1·60	171		·45146	1·59

Mortality rates at all ages for males have almost consistently been higher than for females. Males have the highest risk of mortality as compared with females during their first year of life, from their late 'teens to early 30's and from age 50 to 65. For both boys and girls the risk of mortality drops rapidly during childhood and is lowest at about age 10, increases gradually to about age 40 for males and about 50 for females and then rises steeply with advancing age. At the mortality rates in the 1951 Life Table (*see* Table **31**), about 15,000 males would have died before reaching age 50 as compared with only about 11,000 females, while only 55,000 of the original group of 100,000 males would have survived to age 70 as compared with about 66,500 women.

In 1951, life expectancy at birth reached new high records of 66·3 years for males and 70·8 for females, comparable to the expectancy for other countries of the world with highly developed medical and public health care. Once a child has passed its first year of life, however, its life expectancy increases appreciably. At one year of age a male child at present mortality risks may, on the average, expect to live an additional 68·3 years and a female 72·3 years, representing for an infant boy a gain of two full years more than its expectation at birth and 1·5 more years for an infant girl. The expectation of life of a 15-year-old boy is 55·3 more years; of a 15-year-old girl 59·2 years. At age 25 it is about 46 years for men and almost 50 for women and at age 70, 10·4 for men and 11·6 for women.

32.—Expectation of Life, 1931, 1941 and 1951

Age	1931		1941		1951	
	Male	Female	Male	Female	Male	Female
At birth	60·00	62·10	62·96	66·30	66·33	70·83
1 year	64·69	65·71	66·14	68·73	68·33	72·33
2 years	64·46	65·42	65·62	68·16	67·56	71·55
3 "	63·84	64·75	64·88	67·38	66·68	70·66
4 "	63·11	63·99	64·07	66·56	65·79	69·74
5 "	62·30	63·17	63·22	65·69	64·86	68·80
10 "	57·96	58·72	58·70	61·08	60·15	64·02
15 "	53·41	54·15	54·06	56·36	55·39	59·19
20 "	49·05	49·76	49·57	51·76	50·76	54·41
25 "	44·83	45·54	45·18	47·26	46·20	49·67
30 "	40·55	41·38	40·73	42·81	41·60	44·94
35 "	36·23	37·19	36·26	38·37	37·00	40·24
40 "	31·98	33·02	31·87	33·99	32·45	35·63
45 "	27·79	28·87	27·60	29·67	28·05	31·14
50 "	23·72	24·79	23·49	25·46	23·88	26·80
55 "	19·88	20·84	19·64	21·42	20·02	22·61
60 "	16·29	17·15	16·06	17·62	16·49	18·64
65 "	12·98	13·72	12·81	14·08	13·31	14·97
70 "	10·06	10·63	9·94	10·93	10·41	11·62
75 "	7·57	7·98	7·48	8·19	7·89	8·73
80 "	5·61	5·92	5·54	6·03	5·84	6·38
85 "	4·10	4·38	4·05	4·35	4·27	4·57
90 "	2·97	3·24	2·93	3·13	3·10	3·24
95 "	2·14	2·40	2·09	2·26	2·24	2·27
100 "	1·53	1·77	1·46	1·64	1·60	1·59

Table **32** summarizes the life expectancy figures extracted from the Canadian Life Tables for 1931, 1941 and 1951. During this period life expectancy at birth increased from 60 to over 66 years for men and from 62 to 70·8 years for women. This is a gain for males of 3·4 years since 1941 compared with a gain of almost

3 years in the previous decade; females on the other hand gained 4·5 years since 1941 compared with 4·2 years in the preceding decade. Thus, since 1931, 6·3 years have been added to male life expectancy, while female longevity has been lengthened by 8·7 years.

The increases in life expectancy have been predominantly at the younger ages, particularly in infancy, and diminishing with advanced age. For example, since 1931, 2·6 years have been added to the life expectancy of a 5-year-old male, 1·7 years to a 20-year-old, almost half a year to a 40-year-old and a bare quarter year to a 60-year-old as compared with 6·3 years for a newborn male. During this period, life expectancy for a 5-year-old female gained 5·6 years; for a 20-year-old 4·7 years, 2·7 years for a 40-year-old and 1·5 years for a 60-year-old as compared with 8·7 years for a newborn female.

Longevity has improved for both sexes but more so and at all ages for females, whereas there has been only slight improvement for males beyond middle life. Briefly the rapid decline in the death rate for infants of both sexes is continuing, with slower declines with advancing age, so that relatively stationary death rates have been established from about 50 onwards for males and from about 80 for females.

The fact that such a pattern exists is important in interpreting the results of these life tables. It must be remembered that the arbitrary population of 100,000 of each sex has been subjected here to the mortality rates in effect in 1950-52, and their life expectancy computed as if those death rates at each age were to prevail during their life time. Actually the theoretical 200,000 infants born in 1950-52 will most probably have a pattern of survival and life expectancy quite different from that of the present life table since they will spend most of their lives under conditions of public health and medical care which in all likelihood will be superior to those prevailing in 1950-52.

The improvement in life expectancy, particularly among children and adolescents is owing mainly to the substantial reduction, in recent years, of mortality from infectious diseases; on the other hand, diseases associated with middle and old age are much less amenable to control. It is therefore unlikely that improvement in life expectancy in the future will be comparable to that of the last two decades. As roughly 12 p.c. of all annual deaths occur among infants, and an additional 70 p.c. among persons over 50, any further improvement must come as the result of further declines in mortality from conditions associated with childbirth and early infancy, further control of infectious diseases, prevention of accidents, and advances in combatting diseases associated with middle and old age, such as cardio-vascular–renal conditions and cancer.

Section 8.—Communicable Diseases

Statistics and information on communicable diseases can be found under "Notifiable Disease Statistics", Chapter VI, Public Health, Welfare and Social Security, on pp. 246-249.

CHAPTER VI.—PUBLIC HEALTH, WELFARE AND SOCIAL SECURITY

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

A special article on the development of public health, welfare and social security in Canada appears in the 1952-53 Year Book, pp. 224-229. That article outlines the evolution of provincial and municipal administration, the development of federal responsibility, and governmental expenditure in the fields of health, welfare and social security. A special article dealing in detail with the National Health Grant Program appears at pp. 215-223 of the 1954 edition. For net general and capital expenditures on health and welfare and total spent, by level of governments, for the years 1947-53 *see* chart on the following page.

PART I.—PUBLIC HEALTH*

The planning, supervising and financing of public health and medical care services in Canada rest mainly with the provinces though the actual administration of services is conducted, in most provinces, by municipal and other local authorities. The Federal Government provides consultative and specialist services, assists in the financing of provincial health activities through the National Health Grant Program, and also maintains services for special groups such as veterans and Indians. The functions of the Federal Government are described in Section 1, provincial and municipal health activities are reviewed in Section 2, and hospital statistics are given in Section 4.

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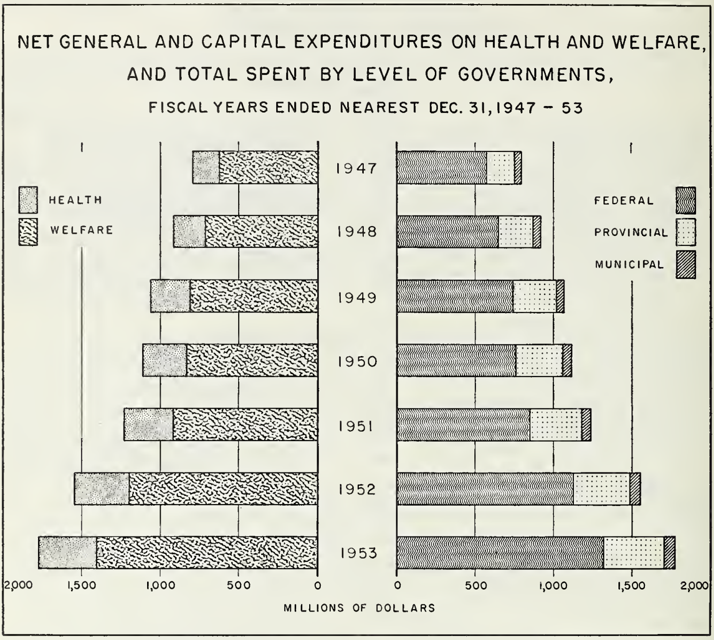
* Sections 1 and 2 of this Part were prepared by the Research Division, Department of National Health and Welfare, Ottawa.



Section 1.—Federal Health Activities

Federal participation in health matters is largely centred in the Department of National Health and Welfare, with certain important programs being administered by the Department of Veterans Affairs, which provides medical and hospital care to veterans chiefly for disabilities resulting from war service; the Department of National Defence, responsible for the health of the Armed Forces; the Medical Division of the National Research Council, which administers grants for medical research; and the Dominion Bureau of Statistics, responsible for the collection and compilation of health statistics. The Department of Agriculture has certain responsibilities in connection with food production.

Under the Department of National Health and Welfare Act of 1944, the Department is responsible for the administration of certain statutes, for research in health matters, for the carrying out of international health obligations undertaken by Canada and, in co-operation with the provinces, for the preservation and improvement of public health.

Under the Quarantine Act, the Department maintains a maritime and aerial navigation quarantine service against entry of infectious diseases; it advises on the administration of sections of the Immigration Act dealing with health, and conducts, in Canada and overseas, the medical examination of applicants for immigration. It also provides care for sick mariners as required under Part V of the Canada Shipping Act, and has certain national and international responsibilities with regard to the pollution of boundary and other waters.

Under the Food and Drugs Act, the Proprietary or Patent Medicine Act and the Opium and Narcotic Drug Act, the Department is responsible for the control of the safety and purity of food and drugs; the registration, preparation and sale of proprietary or patent medicines; and control of the import, export and distribution of narcotic drugs.

The Department advises on the visual eligibility of applicants for blindness allowances and co-operates with the provinces in the provision of surgical or remedial treatment for selected recipients of these allowances; it is responsible for supervision of health conditions for persons employed on federal public works, as provided under the Public Works Health Act, and maintains a program for the conservation and promotion of the health of civil servants and other Federal Government employees. Medical advisory services are provided for the Department of Transport in all matters pertaining to the safety, health and comfort of air crew and passengers.

The National Health Grant Program.*—The National Health Grant Program, introduced in 1948, provides for the payment of federal grants to the provinces for the development of health and hospital services; at the present time 12 grants are available.

Since the inception of the program the provinces have steadily increased their utilization of the grants. The annual amounts of expenditure in each fiscal year have been as follows: 1948-49, $7,600,000; 1949-50, $15,500,000; 1950-51, $18,700,000; 1951-52, $23,900,000; 1952-53, $27,300,000; and 1953-54, $29,500,000. Between 1948 and 1953, expenditures amounted to 53·1 p.c. of the funds available; figures below show that the proportion for 1953-54 was 60·2 p.c.

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* A special article on the first five years of the National Health Grant Program is given in the 1954 Year Book, pp. 215-223.

1.—Amounts Available to the Provinces and Amounts and Percentages Expended under the National Health Grant Program, by Grant, Year Ended Mar. 31, 1954

Grant	Amount Available[1]	Amount Expended	Percentage Expended[2]
	$	$	p.c.
Cancer control	3,598,795	2,363,488	65·7
Crippled children	519,898	449,213	86·4
General public health	7,215,000	5,081,778	70·4
Hospital construction	19,850,651[3]	9,114,164	45·9
Mental health	6,203,652	5,193,141	83·7
Professional training	516,300	699,782	135·5
Public health research	512,900	436,654	85·1
Tuberculosis control	4,239,531	4,460,766	105·2
Venereal disease control	518,099	447,339	86·3
Child and maternal health[4]	500,000	114,342	22·9
Laboratory and radiological services[4]	4,329,000	764,740	17·7
Medical rehabilitation[4]	500,000	58,522	11·7
Totals	**48,503,826**	**29,183,929**	**60·2**

[1] Authorized by P.C. 471-1953. [2] Expenditures may exceed 100 p.c. of amounts available through transfer of unexpended funds from one grant to another. [3] Grant consisted of $6,856,884 for new projects and a re-vote of $12,993,767 to complete projects approved before Apr. 1, 1953, on which construction started before Oct. 1, 1953. [4] These grants were first introduced in the fiscal year 1953-54.

Under the Program up to the end of the fiscal year 1953-54, aid for construction was approved for 49,000 beds, over 6,000 bassinets, approximately 6,400 nurses' beds and space in community health centres and combined laboratories exceeding 3,000 bed equivalents. Approximately 6,500 health workers had been trained or were undergoing special training, and more than 4,800 additional health workers had been employed with federal grant assistance. Preventive and treatment services across the country had been greatly extended, health facilities had been aided by the purchase of additional technical equipment and a significant increase in health research had been made possible.

Federal Grants to Non-governmental Organizations.—Grants are paid directly to the following non-governmental agencies engaged in health work: the Canadian Red Cross Society, the Canadian Tuberculosis Association, the Victorian Order of Nurses, the St. John Ambulance Association, the Canadian Paraplegic Association, the Canadian Mental Health Association, the Health League of Canada, the Canadian Public Health Association, the Canadian National Institute for the Blind, L'Association Canadienne-Française des Aveugles, L'Institut Nazareth de Montréal, the Montreal Association for the Blind and the Canadian Ophthalmological Society.

Federal grants are also provided under the National Health Grant Program to assist in the operation of special treatment services carried out in a number of provinces by voluntary organizations, such as the Canadian Arthritis and Rheumatism Society and various agencies engaged in the rehabilitation of crippled children.

Medical Care of Indians and Eskimos.—Health services for Indians and Eskimos are administered by the Department of National Health and Welfare. In 1953, 20 hospitals, 42 nursing stations and 61 other health centres were operated by the Department which also reimburses, on a per diem basis, the mission and other non-federal hospitals that provide accommodation for Indians and Eskimos. Full-time departmental medical officers serve the larger Indian reserves and part-time officers serve the smaller bands. In some cases, fees are paid to local physicians for services to Indians.

Consultative and Co-ordinating Services.—The principal co-ordinating agency in the health field in Canada is the Dominion Council of Health, which is composed of the Deputy Minister of National Health who serves as chairman, the chief health officer of each province and five other persons. The Council advises the Minister of National Health and Welfare on the formulation of policy. It is largely responsible for the development of a co-operative health program and for the establishment of services by the Federal Government to assist the provincial health departments. Federal-provincial committees of the Council deal with specific aspects of public health.

Certain Divisions of the Department provide technical information and advice concerning the evaluation of programs and procedures and the establishment of standards in various health fields, and conduct surveys in research and development both independently and in co-operation with other departments and agencies. These Divisions include Blindness Control, Child and Maternal Health, Occupational Health, Nutrition, Mental Health, Dental Health, Epidemiology, Hospital Design, the Laboratory of Hygiene, Information Services, and Research.

Section 2.—Provincial and Municipal Health Activities

Health services in the provinces are administered in different ways but provincial functions commonly include central planning and administration; the operation of special programs affecting the entire province in such fields as cancer, mental health, tuberculosis and laboratories; consultant service to local authorities; the administration of regulations governing local services; the provision of basic services in areas without municipal organization; and participation in the work of local health units in areas where that type of administration has been developed.

At the local level, responsibility for services varies widely, but municipalities in most provinces provide a range of basic public health services and participate in the costs of hospital care for indigents. In recent years there has been a rapid growth of health services in smaller centres and rural areas through the organization of health units with full-time staff serving counties or other combinations of local government areas. This type of organization, which concentrates on a generalized health program that includes public health nursing, sanitary inspection, communicable disease control, child, maternal and school hygiene and health education, has been introduced in most provinces; financial and administrative responsibility is shared by the provincial and local authorities involved. Despite a trend towards greater provincial participation in these local units, many remain under local administration as do the highly developed health departments found in the larger cities. Outside of fully organized health-unit areas, municipalities usually appoint part-time medical officers and other personnel while the provincial authorities assume responsibility in the areas lacking municipal organization.

Newfoundland.—Health measures in Newfoundland are centrally administered by a Department of Health. Its main functions include the operation of tuberculosis, venereal disease and other communicable disease control programs, nutrition and sanitary inspection services, and the provision of prepaid medical, hospital and nursing care throughout large areas of the Island.

The Provincial Tuberculosis Dispensary at St. John's provides free diagnostic and treatment services, and acts as a centre for tuberculosis control. The Province subsidizes additional tuberculosis control services conducted in northern areas by the International Grenfell Association and the Notre Dame Bay Memorial Hospital, and assists X-ray surveys by the Newfoundland Tuberculosis Association, which maintains a number of mobile X-ray units.

Provincially administered venereal disease facilities include one central clinic in St. John's and part-time clinics at various cottage hospitals throughout the Province. Free treatment services and drugs for venereal disease are available to all persons attending the central clinic, all cottage hospital subscribers and medical indigents.

A school health program includes educational work and such nutritional activities as the distribution of chocolate milk-powder and cod-liver oil. Public dental services for school children are made available through a provincial clinic at St. John's, and a sea-borne dental clinic in the Bonne Bay area, operated by the Junior Red Cross.

The Department of Health operates a general hospital, two tuberculosis sanatoria and a hospital for mental and nervous diseases. Hospitals operated by voluntary organizations receive per diem payments for departmental cases and, in certain outlying areas, substantial provincial grants.

The "cottage hospital" scheme operates on a voluntary prepayment basis and is designed to provide hospital service to approximately 150,000 and domiciliary medical care to about 100,000 of the population of outlying areas. Services are provided through 17 small provincially operated hospitals having a total capacity of about 430 beds; most of them are equipped with laboratory and X-ray facilities. Medical officers and nursing stations in adjoining communities supplement these services. In most cottage hospital areas, prepayment of $15 annually for the head of each family and $7·50 for single adults entitles subscribers to out-patient diagnosis and treatment, to home visits by the doctor and to hospitalization, as required. When necessary, hospitalized cases may be referred to the general hospital at St. John's or to hospitals outside the Province. Hospitalization for maternity is provided only in complicated cases. In three areas, additional premium payments are required to purchase medical services outside of hospitals. In districts not served by doctors, nursing services are provided on payment of a small annual fee. In general, the cost of medical and hospital care for indigents is borne by the Province, but beneficiaries under such programs as federal Old Age Security are usually required to pay premiums in cottage hospital areas.

Prince Edward Island.—The Health Branch of the Department of Health and Welfare includes Divisions of Public Health Nursing, Nutrition, Sanitary Engineering, Dental Health, Laboratories, Venereal Disease Control, Cancer Control, Tuberculosis Control, Mental Health and Vital Statistics.

Generalized public health nursing services are conducted by ten district nurses, and sanitary services are provided by three inspectors under the direction of a public health engineer. Free dental treatment is available for needy children at permanent clinics in Charlottetown and Summerside and for children in Grade I classes in rural areas through two mobile units. Laboratory facilities are being decentralized through the establishment in the larger hospitals of branches that remain under the supervision of the Central Laboratory at Charlottetown. A provincial venereal disease clinic is operated at Charlottetown.

Free diagnostic services for tuberculosis are made available through two stationary clinics and a mobile unit operated by the Division of Tuberculosis Control; in addition a mobile X-ray unit is provided by the Tuberculosis League. At the Provincial Sanatorium at Charlottetown, treatment services though not unqualifiedly free, are heavily subsidized by the Province; rehabilitation training and employment-placement services are provided. The Sanatorium contains a special treatment unit for poliomyelitis patients with residual paralysis; the Province pays one-half the cost of hospital care, physiotherapy and special nursing services.

Free diagnostic services for cancer are given at a clinic located at Charlottetown. Hospitalization for diagnosis is provided without charge for a period of three days for indigent cancer patients. A mental health diagnostic clinic has been opened at Charlottetown, and a speech therapy service has been established for school children with speech and hearing impairments.

Per diem grants are made to general hospitals for all patients and the Province also defrays the cost of operating the Falconwood Mental Hospital and the Provincial Infirmary.

Nova Scotia.—The principal Divisions of the Department of Public Health are Laboratories, Neuropsychiatry, Hospitals, Vital Statistics, Dental Hygiene, Nutrition, Nursing Service and Sanitary Engineering. In addition, a provincial program of generalized public health services is administered through eight local health divisions, each staffed by public health nurses and sanitary inspectors under the supervision of a full-time divisional medical health officer. The City of Halifax operates its own Health Department.

Laboratory services, including bacteriological and other examinations and milk and water analyses, have been improved and extended through the work of the Provincial Central Laboratory at Halifax and branch laboratories at Sydney and Kentville. Laboratory tests and field investigations are also conducted by the Section of Industrial Hygiene in the Division of Laboratories.

Field services for the detection of tuberculosis and venereal disease are mainly provided through eight provincially administered local health divisions. In addition, the Department maintains 12 clinics for the free treatment of venereal disease, and conducts mass tuberculosis X-ray surveys in co-operation with the Nova Scotia Tuberculosis Association. Free treatment for tuberculosis is provided in three provincial sanatoria and the municipal sanatorium at Halifax.

Community mental health services include clinics at Sydney and Digby, and an in-patient and out-patient psychiatric service at the Victoria General Hospital, Halifax. Institutional facilities for mental patients include one active treatment mental hospital operated by the Department of Public Health, a training school for mental defectives maintained by the Department of Welfare and 17 county homes administered by local government authorities.

Three provincial mobile dental clinics provide treatment for children in rural areas. A cancer clinic and a treatment clinic for poliomyelitis form part of the service at the provincially owned Victoria General Hospital. All approved general hospitals receive a provincial per diem subsidy for each patient.

Recipients of blind persons' allowances and mothers' allowances are eligible for limited medical services from the Medical Society of Nova Scotia, including physician's care in the home and office but excluding hospital attendances, surgery, and medical aids or appliances. Under the Hospital Act of Nova Scotia, persons in any of the public-assistance categories as well as other indigents are entitled to receive hospitalization as a municipal responsibility.

New Brunswick.—The Health Branch of the Department of Health and Social Services includes the following Divisions: Hospital Services and Cancer Control, Laboratories, Public Health Nursing, Communicable and Venereal Disease Control, Tuberculosis Control, Maternal and Child Health, Dental Health, Mental Health, and Sanitary Engineering.

Medical health officers and most public health nurses are employed by the Province while other local health services are provided through 16 local sub-districts, each corresponding to a county and each having a board of health composed of members appointed by municipal councils. Responsibility for the various local public health functions is divided between the Province and the boards of health. Usually, from two to four sub-districts are serviced by a district medical health officer assisted by public health nurses. Certain locally administered nursing services are subsidized by the Province.

Pathological, bacteriological, serological and chemical tests are provided by the Provincial Laboratories at Saint John and Fredericton which also supervise the distribution of vaccines, sera and bacteriologicals, including free immunizing agents, drugs for the treatment of venereal diseases and insulin for indigent diabetics. A Mobile Hygiene Laboratory conducts analyses of milk and of water during the summer months.

Free diagnostic services for tuberculosis are provided by district medical health officers in eight centres, and by a central clinic operated by the New Brunswick Tuberculosis Association at Saint John. The Health Department supervises and provides free treatment in two privately operated, one municipal and two provincially owned sanatoria. One clinic for the treatment of venereal disease is operated at Saint John.

Ten cancer diagnostic clinics provide free diagnosis and free tissue-examination service. X-ray and radium treatments are provided without charge in four of the larger hospitals to patients who come under the supervision of the cancer clinics. Acute and immediate post-paralytic cases of poliomyelitis also receive free hospital treatment and grants are made to the Junior Red Cross to provide free treatment for other crippling conditions in children.

A mental health program includes the operation of three preventive and diagnostic clinics and provides special psychiatric training for teachers on regular school staffs in the larger centres. Hospitalization for mental illness is available in the provincial hospitals at Lancaster and Campbellton.

Provincial per diem grants are paid, on behalf of all patients, to approved general hospitals.

Quebec.—The Ministry of Health maintains the following Divisions: County Health Units, Sanitary Engineering, Epidemiology, Laboratories, Demography, Psychiatric Hospitals, Public Charities, Industrial Hygiene, Nutrition, Venereal Disease, Tuberculosis, Health Education, and Medical Services to Settlers.

The Division of County Health Units supplies services through 67 county and multi-county health units covering more than 60 p.c. of the population of the Province. The maintenance and operation of these units, each with a full-time medical health officer assisted by public health nurses and sanitary inspectors, is the responsibility of the Ministry of Health, with small local financial contributions. In addition, full-time health departments operated by the larger cities serve more than one-third of the provincial population. Drugs supplied by the Provincial Department to physicians and health units include vaccines, sera, streptomycin for sanatoria patients and penicillin for venereal disease. Laboratory services, including bacteriological and other analyses, are available to physicians and health units at the Central Laboratory, Montreal.

The Province organizes tuberculosis clinics in rural areas and gives assistance to city agencies operating clinics or dispensaries for prevention, case-finding and treatment. BCG immunization against tuberculosis, administered to new-born infants in hospitals and available to children generally through the health units, is a special feature of the control program. The Department supervises tuberculosis sanatoria and mental institutions, which are operated chiefly under private and religious auspices; in these, the majority of patients receive care without charge.

The Medical Services to Settlers Division provides free nursing and physician services to residents of isolated areas. The staff consists of salaried nurses and part-time physicians paid on a fee-for-service basis. Services given include obstetrical care, examinations, vaccinations and immunizations, and emergency medical care.

No specially organized program of medical care exists for public assistance recipients in Quebec, although free care to indigents is available from a variety of dispensaries, clinics and other charitable agencies. Under the provisions of the Public Charities Act, free public hospital care is provided to persons unable to pay, with about 50 p.c. of the cost assumed by the Province, 15 p.c. by the responsible municipality and the remainder by the recognized agency providing the service.

Ontario.—The Department of Health carries on public health services through the following Divisions: Health Units, Public Health Nursing, Maternal and Child Hygiene, Dental Services, Epidemiology, Venereal Disease Control, Tuberculosis Prevention, Industrial Hygiene, Laboratories, Medical Statistics, Mental Health and Ontario Hospitals, Nursing, Public and Private Hospitals, and Sanitary Engineering.

Local public health services are available to more than one-quarter of the population through 27 health units administered locally but with consultative services and financial support supplied by the Department. Elsewhere, local services are organized through full- or part-time municipal health departments, and by the Province in unorganized territory. Provincial grants are made to local boards of health for school dental services and venereal disease clinics. Special grants are made to hospitals for the treatment of first admission poliomyelitis patients.

Public health legislation affecting water supplies, milk and food and other environmental sanitation is administered by the Department. Maternal and child health care is provided through clinics and, in addition, any expectant mother may receive one free pre-natal examination. Systematic dental examinations for children combined with instruction in dental hygiene have been initiated in four local health units and two city health departments; school dental treatment services are provided by various municipalities. In northern areas, two railway dental cars operated by the Province and three mobile units maintained by the Red Cross provide educational and treatment services in less-populated districts.

The Central Laboratory, eleven regional laboratories, six subsidized associated laboratories and one mobile unit carry out bacteriological and other examinations for clinics, hospitals and private physicians. Biologicals and other materials for the prevention and control of communicable diseases, insulin for indigent diabetics and streptomycin for tubercular patients are distributed free of charge by the Department. Chest clinics, held in more than 200 centres, are financed mainly through funds of local tuberculosis associations and the Department. The Province pays the major portion of the cost of maintaining patients in 14 sanatoria operated by voluntary groups. Cancer control services are administered by the Ontario Cancer Treatment and Research Foundation and provincial grants are given to this organization to subsidize diagnosis and treatment in eight regional centres. Care is provided for the mentally ill in 17 institutions operated by the Province, these include special units for mental defectives, epileptics, the tubercular and the criminally insane. Community mental health services such as psychiatric wards in general hospitals, travelling clinics and child guidance centres have been widely developed by general and mental hospitals, municipal health departments and other agencies. The Ontario Alcoholism Treatment and Research Foundation operates a special treatment centre for alcoholics.

A formal arrangement between the Province and the Ontario Medical Association makes limited medical services available to the recipients of all types of public assistance, including former means-test old age pensioners now receiving the universal pension, and persons receiving old age assistance, blindness allowances, mothers' allowances, and unemployment relief. New applicants for the universal old age pension may qualify under the medical plan on a means-test basis. Recipients of Ontario's disabled persons' allowances (for permanently disabled persons 18 to 65 years of age) have also been included since the inauguration of this new category program in July 1952. The medical program includes the services of a physician in his office or the patient's home, necessary consultations, home confinements, certain diagnostic services and emergency drugs. With the exception of unemployment relief cases where the costs are shared equally by the Province and the responsible municipality, the Province assumes the costs of such services which are paid on a fee-for-service basis from a special fund.

Provincial per diem grants, which vary according to hospital size, are paid to all public hospitals on the basis of public-ward bed days. Special per diem grants are also made by municipalities on behalf of hospitalized indigent residents, including public assistance recipients.

Manitoba.—The Health Branch of the Department of Health and Public Welfare includes Sections of Extension Health Services, Preventive Medical Services, Environmental Sanitation, Laboratory Services and the Division of Psychiatric Services.

Local preventive health services including health and laboratory and X-ray units are operated by the Health Extension Section which recovers part of the costs from the municipalities served. Public health services, currently covering approximately one-third of the Province's population, are provided through 13 full-time units, each comprising a variable number of municipalities; another third of the population is covered by Winnipeg's health service facilities. In three health-unit areas, prepaid diagnostic X-ray and laboratory facilities have been organized. Outside the health-unit areas, the Provincial Nursing Service provides certain public health services. Mobile clinics provide dental services for children in rural areas.

Under a system of district organization for hospital facilities, 34 hospital districts have been established; all but two contain at least one general hospital augmented in many cases by one or more medical nursing units. Municipal prepayment plans for medical care operate in a number of medical-care districts.

Provincial mental institutions are operated at Winnipeg, Selkirk and Brandon and a school for the mentally defective at Portage la Prairie. Community mental health services are also conducted, including out-patient services at mental hospitals and child guidance clinics.

Provincially operated clinics provide preventive and treatment services for venereal disease. Tuberculosis control is administered by the Sanatorium Board of Manitoba and services include diagnostic and travelling clinics, chest X-ray surveys and a rehabilitation program. The Province assists in the program by maintaining a Central Registry of Tuberculosis and a follow-up service for discharged patients carried out by public health nurses. The cost of hospitalization and treatment in sanatoria is met by provincial grants. The Manitoba Cancer Relief and Research Institute, which is subsidized by the Province, administers all cancer activities. A free cancer biopsy service is available and diagnostic services are provided to medically indigent rural residents. Radium and X-ray treatments are available without charge to rural residents and at a nominal charge to residents of Greater Winnipeg.

Laboratory services are provided through provincial laboratories at Winnipeg and Brandon. In addition, the Department distributes, to doctors, hospitals and government agencies, penicillin and other drugs for the treatment of venereal disease, insulin and other biologicals for indigents and antibiotics for tubercular patients.

The Provincial Government contributes a grant of one dollar per diem to hospitals and sanatoria for all public-ward patients and lump-sum grants to teaching hospitals.

Public assistance recipients in Manitoba are eligible for limited medical, dental and optical care, on a means-test basis, with the major share of the cost of services assumed by the responsible municipality. Hospital care is provided on a similar basis, municipalities making a per diem payment for persons with local residence, in addition to the provincial per diem grants. The Province assumes the cost of medical and hospital care provided to some indigents who are unable to establish local residence.

Saskatchewan.—The Saskatchewan Department of Public Health has five main Branches: Regional and Preventive Health Services, Medical and Hospital Services, Psychiatric Services, Research and Statistics, and Administrative Services. The Health Services Planning Commission functions as an advisory and planning agency on major policy and administrative matters in the Department.

The Regional and Preventive Health Services Branch includes Divisions of Communicable Disease Control, Child Health, Venereal Disease Control, Nursing Services, Dental Health, Nutrition and Sanitation. These Divisions organize province-wide programs and provide consultative services to local health personnel. The Communicable Disease Control Division distributes free vaccines and sera, and supervises immunization programs. Four clinics for diagnosis and treatment are maintained by the Venereal Disease Control Division. Field services for venereal disease, tuberculosis, mental health and other public health programs are supplied by the Nursing Services Division. Public health laboratory services and the free distribution of certain drugs and biologicals are carried out by the Provincial Laboratories.

The Regional Health Services Branch is also responsible for the organization of health regions which are administered by locally elected health boards although staff is appointed and financial assistance is provided by the Province. Eight of the proposed regions are currently in operation. In addition to the general public health services provided in all regions, the Swift Current Health Region has a prepaid medical-care plan including general practitioner, specialist and diagnostic care for all residents, and limited dental services for children. The plan is financed by personal and property taxes with some Provincial Government contributions. Dental health programs for children have been launched in two other regions.

The Medical and Hospital Services Branch is responsible for the operation of the Saskatchewan Hospital Services Plan, administers the program of medical services to public assistance recipients, supervises the operations of the municipal doctor programs and the Air Ambulance Service, and administers a rehabilitation program for crippled children and poliomyelitis patients through the Physical

Restoration Division. In addition to free hospital care, complete medical as well as dental and optical services, including some auxiliary services, are provided to the recipients (including spouses) of the universal old age pension who were formerly in receipt of the old age means-test pension or who can qualify for the provincial supplementary allowance. Persons and their dependants receiving blindness or mothers' allowances, social aid cases and provincial wards are also eligible. Drugs are provided subject to deterrent charges paid by patients of 20 p.c. of the cost. The Provincial Government meets the expenses under the medical program and, for most of these cases, the hospital insurance tax as well. Provincial subsidies of 25 cents per capita per annum and equalization grants are paid to about 100 municipalities with municipal doctor contracts.

The Psychiatric Services Branch supervises psychiatric hospitals and administers community psychiatric services including clinics. Free care and treatment is given for all mentally ill and mentally defective persons requiring hospitalization. The tuberculosis control program, operated by the Saskatchewan Anti-tuberculosis League, includes preventive and treatment services, the latter financed by provincial per diem grants and municipal levies. The Saskatchewan Cancer Commission co-ordinates all cancer-control measures and operates publicly financed consultative, diagnostic and treatment clinics at Saskatoon and Regina.

Under the Saskatchewan Hospital Services Plan, which is a universal compulsory hospital-insurance scheme, most residents are eligible for in-patient public-ward care by the annual prepayment of a personal tax of $15 by all persons 18 years of age or over or self-supporting, and of $5 for each dependant under 18 years of age, with a maximum family tax of $40. Additional funds are provided by the Province, as needed, from general revenue, including, since April 1950, one-third of the proceeds of a 3-p.c. sales tax.

Alberta.—The Department of Public Health includes Divisions of Communicable Diseases and Health Units, Public Health Education, Hospital and Medical Service, Municipal Hospitals, Laboratory, Public Health Nursing, Social Hygiene, Sanitary Engineering, Cancer Services, Mental Health, Tuberculosis Control, Health Entomology, Nutrition Services and Vital Statistics.

For the provision of local health services, the Province is divided into health-unit districts. The units are administered, with Departmental supervision and financial aid, by local boards of health composed of members appointed by local governments. Fourteen units are directed by full-time medical health officers and two units by public health nurses. Outside the health-unit areas, the Department operates a district nursing service in outlying communities and is generally responsible for health services in unorganized territory. The larger cities have their own full-time health departments.

Free services regularly provided through Departmental clinics include diagnosis and treatment for venereal disease, medical examination for cancer, mental guidance and psychiatric examinations, X-ray examinations and tests for tuberculosis at stationary and travelling clinics, and mobile X-ray units. Provincial laboratory services at Edmonton and Calgary are available to all doctors and approved hospitals, and sera and biologicals are distributed for preventive work.

On the recommendation of provincial cancer clinics, surgical, X-ray and radium treatment, and hospitalization up to a limit of seven days for diagnostic purposes are provided by the Department. There are four provincial institutions for the mentally ill and one for mental defectives. Sanatoria care and treatment are provided without charge for all resident tubercular patients and out-patient pneumothorax services are also available. The Department bears the cost of hospital and medical care for rheumatoid arthritic patients under 25 years of age and provides all residents suffering from poliomyelitis with medical, surgical and hospital care and rehabilitation services. Provision has been made to extend treatment services to cerebral palsy patients. All maternity patients satisfying resident requirements may be hospitalized for a 12-day period at provincial expense, and a provincial grant is authorized to assist those who receive maternity services at home.

By agreement with the Alberta College of Physicians and Surgeons and the Dental Association, medical, optical and some dental services are provided to all persons (and dependants) on the universal old age pension who were formerly in receipt of the means-test pension or who can qualify for the provincial supplementary allowance, as well as recipients of old age assistance or blindness or mothers' allowances. The Province assumes the cost involved and also reimburses the municipalities for 60 p.c. of their expenditure on any medical care provided to local indigents. An agreement exists with the Associated Hospitals of Alberta under which public assistance recipients receive standard public-ward care and necessary drugs, for which the Province pays reduced per diem rates.

A municipal hospital program provides standard hospitalization for nearly all the population of the Province. The plan is operated at the local level, under provincial supervision, with costs distributed among the patient, the municipality and the Provincial Government. The patient is charged $2 per day and the municipality meets the remainder of agreed charges for public-ward care and extra services. The Provincial Government then reimburses the municipality for one-half of this amount.

British Columbia.—The Health Branch of the Department of Health and Welfare consists of three bureaux, two located at Victoria and one at Vancouver. The Bureau of Local Health Services at Victoria includes Divisions of Health Units, Public Health Nursing, Public Health Engineering, Environmental Management, and Preventive Dentistry. The Central Administration Bureau, also at Victoria, includes Vital Statistics and Public Health Education. The Divisions of Tuberculosis Control, Venereal Disease Control and Laboratories form the Bureau of Special Preventive and Treatment Services, located at Vancouver.

The provision of local public health services is on a health-unit basis. These units are administered and staffed by the Province but are jointly financed by the Province and the local municipalities concerned. Sixteen units, covering 50 p.c. of the population, are in operation. In isolated areas, Public Health Nursing Districts, staffed by public health nurses and sanitary inspectors, are forerunners of fully organized health units. The cities of Vancouver and Victoria have their own health departments.

Special provincial public health services include tuberculosis clinics which provide free diagnostic and consultative service, venereal disease clinics which offer free diagnosis and treatment, and maternal and child health clinics operated by public health nurses which provide immunization and pre-natal and post-natal advice. Branch laboratories are maintained in various parts of the Province through which immunizing agents are distributed free of charge to doctors, health officers and public health nurses. Children's preventive dental programs, provincially subsidized, have been organized in four local health units. In addition, child dental clinics with local dentists participating are established in 43 communities, the costs being met equally by the community and the Province. In connection with mental health services, the Province operates stationary and travelling child-guidance clinics. A clinic of psychological medicine at the provincial hospital at Essondale functions as an investigatory and active treatment centre for short-term patients.

Provisions for the treatment and control of cancer, which include a treatment centre and a nursing home at Vancouver, consultative clinics located throughout the Province and a free province-wide biopsy service, are the responsibility of the British Columbia Cancer Foundation, an official agent of the Provincial Government. The Province pays the operating costs of the Foundation and helps finance voluntary programs concerned with the physical rehabilitation of paraplegics and cerebral palsied children, the care and treatment of arthritics, and the maintenance of blood-transfusion services.

Institutions for the care of tubercular and mental patients and infirmaries for persons with incapacitating disabilities are operated by the Province. Indigents are hospitalized in these institutions at public expense while other patients pay if financially able. Rehabilitation services are available to tubercular and mental patients.

Full medical, dental and optical care, prescribed drugs and some auxiliary services are provided to all persons (and their dependants) receiving the universal old age pension who were formerly on the means-test old age pension or who can qualify for the provincial supplementary allowance, and to recipients (including dependants) of old age assistance, blindness or mothers' allowances, local relief and to certain child wards. The Provincial Government assumes the costs of hospitalization for all such persons. Where they hold municipal residence, the Province assumes 80 p.c. of the cost of the medical program, the remainder being shared by all municipalities on a population basis.

Public-ward hospital services are available to all provincial residents through a public hospital-care program administered by the Hospital Insurance Service. Before 1954, the plan was financed mainly by flat-rate premiums, but costs now are met from general revenues and part of the provincial sales tax. Payment of $1 for each day of hospitalization, with no maximum, is required of patients.

Section 3.—Health Statistics

Compared with the well established and highly standardized vital and institutional statistics, other national health statistics are still in an early developmental stage in Canada as well as in most other countries. Only in recent years, with recognition of the increase in life span and the impact of the aging of the population, has it become generally understood that mortality and communicable disease statistics can no longer serve as the sole yardstick by which to measure a nation's health. Though many infectious diseases have been effectively controlled, other diseases, particularly those characteristic of an older population, cause much illness and disability, requiring a large volume of health services, without becoming immediately fatal and thus without being adequately reflected in mortality statistics.

A good deal of valuable statistical material exists in some provinces regarding certain aspects of their health services. Nationally, the only source available so far on general illness, health services, and personal expenditure for health care is the Canadian Sickness Survey 1950-51. Statistics on causes of death are shown in the Chapter on Vital Statistics, pp. 204-5, and statistics of hospitals, mental and tuberculosis institutions are dealt with in Section 4 of this Chapter. Other health statistics collected nationally, deal with notifiable diseases, illness among some 100,000 federal Civil Servants, and home nursing services. Following are some details on the Canadian Sickness Survey and notifiable disease reporting.

Canadian Sickness Survey 1950-51.—The Canadian Sickness Survey, carried out during a twelve-month period commencing in the autumn of 1950, sought to give estimates of the incidence and prevalence of illness and accidents of all kinds, the amount of medical, nursing and other health care received, and the volume of family expenditures for the various types of health services. It was the first nation-wide study of prevalence of illness in the general population of Canada.

Begun by the Department of National Health and Welfare the survey was carried out by the 10 provincial health departments with funds from the federal National Health Program.

The survey was planned and organized jointly by the Dominion Bureau of Statistics and the Department of National Health and Welfare in consultation with the provinces whose health departments gave full co-operation.

The survey method consisted of personal visits, by specially trained enumerators, to a sample of approximately 10,000 households distributed throughout each of the 10 provinces in metropolitan, small urban and rural areas. Less than 5 p.c. of these households refused to participate in the survey. Of the remaining households over 80 p.c. of the individuals involved remained in the sample throughout the survey period. All information, including particulars of income, housing and environment, was obtained by direct interview of a household informant, usually the housewife. Though the starting dates for the survey varied somewhat in different provinces, a total of 14 monthly visits was made to most of the households in the sample. On the first visit the enumerator introduced the survey and left a special calendar designed to help the informant keep a detailed day-to-day record of current sickness and expenditures for each member of the household. During each of the succeeding twelve months, the enumerator interviewed the informant and recorded the sickness experienced by each person since the previous visit. The final visit was made to review the information recorded throughout the whole survey period. Uniformity of practice in the 10 provinces was maintained by frequent consultation among the agencies involved, by uniform instructions to the enumerators and by the use of three standard record forms—a Household Record, an Individual Sickness Record and an Expenditures Form. Auxiliary schedules, also standardized, were used to record permanent physical disabilities and also health services which were desired but not obtained.

The sample was designed to obtain estimates within a sampling error of 20 p.c. for events occurring at least once among every 50 persons in the population during the year. Indications are that for a large proportion of the estimates the error will be substantially smaller. Area sampling was used for the survey. As a first stage six domains (regions) of study were established consisting of four single provinces and two groups of three provinces each. Within each domain of study three types of area were considered—metropolitan, urban and rural. Within these areas multi-stage sampling was adopted. In metropolitan centres, all of which were included in the sample, and in some of the sampled urban areas, the first stage of sampling was the block; the second stage, the household. In other urban areas systematic sampling from a list of households was used. Rural areas were divided into primary sampling units and grouped into strata. Within each stratum one primary sampling unit was selected and multi-stage sampling applied. The first stage was the selection of clusters or segments within the primary sampling unit and the second stage was the selection of households within the chosen clusters.

In designing the sample extensive use was made of population, social and economic data obtained from 1941 Census material. Similarly, the results of the 1951 Census, which was taken at about the mid-point of the survey period, provided the necessary distributions concerning persons and families for the calculation of national and provincial figures. The basic survey units for data on illness were the individual persons; the units for expenditures on health services included families, as defined in the Census, together with certain single persons whether living alone or with other families as roomers or relatives.

Data on certain aspects of the survey are still being processed. The following is a brief abstract from the available preliminary information regarding the three main features of the survey: volume of sickness, volume of medical care received, and family expenditures for health care and services.

Estimated Volume of Sickness during the Survey Year.—The survey distinguishes three broad groups of severity, not in a clinical sense of seriousness but in its effect on the patient's capacity to go about his usual activity. These groups are: (1) confined to bed (bedfastness), (2) inability (disability) to continue usual activity (*e.g.*, work, going to school, homemaking, etc.), and (3) any complaint, whether severe or only very minor such as headache. It must be kept in mind that the information was obtained from lay informants mostly by lay enumerators. Following are the average days of sickness per person as estimated from the survey data:

ESTIMATED AVERAGE DAYS OF SICKNESS PER PERSON DURING SURVEY YEAR

Group	*Both Sexes*	*Male*	*Female*
		No. of Days	
Confined to bed (home or hospital)	5·6	5·0	6·2
Disability	11·9	12·1	11·7
Any complaint	51·4	44·6	58·4

ESTIMATED AVERAGE DAYS OF SICKNESS PER PERSON, BY AGE

Age	*In Bed*	*Disability*	*Any Complaint*
		No. of Days	
Under 15 years	5·3	10·4	34·9
15–24 years	3·8	8·4	32·1
25–44 "	4·8	9·3	53·6
45–64 "	6·2	15·3	70·9
65 years or over	12·0	26·8	101·9
ALL AGES	5·6	11·9	51·4

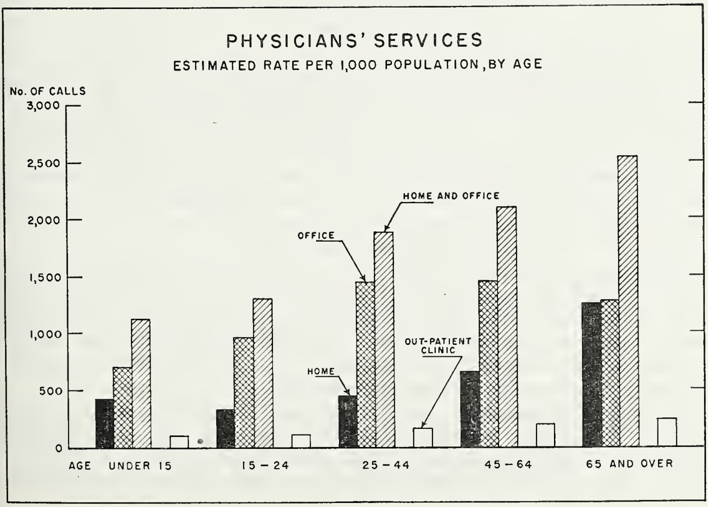
Volume of Physicians' and Dentists' Services.—The survey did not cover physicians' visits at the hospital and, therefore, these visits are not included in the following statements. The statement on dentists' visits shows only the number of visits and does not reflect the type of service performed.

ESTIMATED RATE PER 1,000 POPULATION OF PHYSICIANS' SERVICES

Type	*Both Sexes*	*Male*	*Female*
Office and home calls	1,650	1,320	1,990
Office calls	1,130	910	1,360
Home calls	520	410	630
Out-patient hospital clinic visits	150	160	140

ESTIMATED RATE PER 1,000 POPULATION OF PHYSICIANS' SERVICES, BY AGE

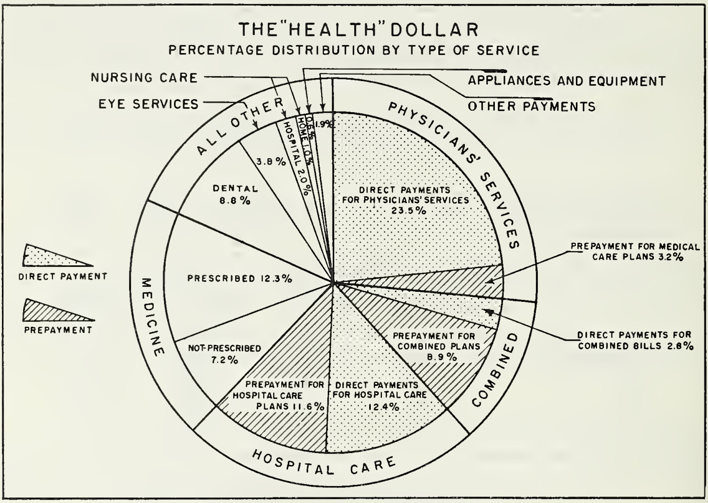
Age	*Home and Office Calls*	*Office Calls*	*Home Calls*	*Out-patient Clinic Visits*
Under 15 years	1,120	700	420	100
15–24 years	1,300	970	330	110
25–44 "	1,880	1,440	440	170
45–64 "	2,100	1,450	650	200
65 years or over	2,530	1,280	1,250	240
ALL AGES	1,650	1,130	520	150



ESTIMATED RATE PER 1,000 POPULATION OF DENTISTS' VISITS

Both sexes	320
Male	260
Female	380

Health Care Expenditures.—The chart below shows the estimated classification of the family dollar expended for health care by the type of service. The percentage figures refer only to actual payments made by family members during the survey year, and do not include payments made from public funds or contributions from third parties such as employers' contributions to prepayment plans.


THE "HEALTH" DOLLAR
PERCENTAGE DISTRIBUTION BY TYPE OF SERVICE

Notifiable Disease Statistics.—Morbidity reporting procedures for notifiable diseases are carried out at three levels: local, provincial and federal. The primary legislative and regulatory power in the field of communicable disease control, as in most other health matters, rests with the provinces. Cases of notifiable diseases are reported to the local Medical Health Officer, who in turn reports to the provincial department of health. The provincial department transmits to the Dominion Bureau of Statistics a weekly summary report showing total cases for the province as a whole and for each city of 10,000 population or over.

The Dominion Council of Health, which consists of the Deputy Minister of National Health, the Deputy Ministers of Health of each of the provinces, and certain lay appointees, provides an opportunity for an exchange of information on reportable disease practices followed in the various provinces, as well as for reaching common understanding or agreement on co-ordinated or uniform requirements or procedures, where such is deemed desirable.

The federal Department of National Health and Welfare is keenly interested in matters of communicable disease control. Through its various consultative services and through the National Health Grants Program, practical, as well as financial, assistance is available to the provinces for developing services and control programs, and for carrying out special morbidity or epidemiological investigations. For example, the Division of Epidemiology receives weekly telegraphic reports from the provinces on cases of poliomyelitis during epidemic periods and is prepared to render practical assistance in establishing control measures or in co-operating in the investigation of unusual epidemiological features. The National Health Grants Program includes specific grants for venereal disease and tuberculosis control, the latter being apportioned to provinces on a formula based on 50 p.c. for population and 50 p.c. for the average number of deaths from tuberculosis in the previous five-year period. A variety of other communicable disease control programs or research studies are assisted under the General Public Health Grant and the Public Health Research Grant. In considering the justification and approval of such projects, the Department relies to a great extent on information regarding incidence acquired through the notifiable diseases reporting system.

The Dominion Bureau of Statistics compiles and publishes weekly and annual reports on the incidence of notifiable diseases. It also supplies the provinces with weekly report forms and Notification of Venereal Infection forms. The weekly summary published by the DBS shows data for the current week, previous week (adjusted for reporting of delayed cases and change of diagnosis), five-year median, cumulative number of cases from the beginning of the calendar year, and the weekly number of cases for certain diseases reported in the United States. Generally speaking, the figures refer to new cases reported at the place where first diagnosed. The printed reports are released on Thursday of each week, 11 days after the end of the report week (Saturday). This amount of time is necessary to allow for the transmission and compilation of the reports from the local level to the provincial and federal departments. These weekly summaries are issued to provincial departments of health and other health agencies in Canada and abroad.

The postal regulations permit the free transmission through the mails of notifiable disease reports, collected by provincial departments, which are also intended, by agreement under Section 9 of the Statistics Act, for the use of the Dominion Bureau of Statistics. This means that all reports of a statistical nature can be forwarded by the Post Office Department from the field through provincial departments to the DBS free of postage. A free supply of report forms to the physicians and their free transmission through the mail are important steps toward removing obstacles to complete reporting.

Monthly epidemiological reports, showing reported cases and deaths, were sent to the League of Nations, Geneva, from 1924 to 1940. Current weekly reports and corrected annual figures are supplied to the World Health Organization, Geneva, and the Pan American Sanitary Bureau, Washington, D.C.

Through the courtesy of the United States Public Health Service an exchange of data on notifiable diseases was instituted in January 1942 between the United States and Canada. This service consists of the exchange of the Weekly Communicable Disease Summary and the Weekly Morbidity and Mortality Report of the National Office of Vital Statistics, Department of Health, Education and Welfare, Washington, D.C., for similar reports of the Dominion Bureau of Statistics.

The limitations of data on notifiable diseases are well known to those in the field and are being taken into consideration: they are mainly, incompleteness of reporting, particularly in regard to certain diseases, and variations of reporting practices and procedures. Nevertheless, the figures have always been valuable as indicating the trend of occurrence of these diseases.

2.—Reported Cases of Selected Notifiable Diseases and Rates per 100,000 Population, 1926-53

Year	Diphtheria	Poliomyelitis (All Types)	Smallpox	Tuberculosis (All Types)	Typhoid and Paratyphoid Fever
			Numbers of Cases		
Av. 1926-30	8,301	661	2,189	5,743	3,270
Av. 1931-35	3,294	637	273	8,287	2,410
Av. 1936-40	2,777	1,202	90	9,322	1,760
Av. 1941-45	2,917	800	9	12,926	1,195
1946	2,535	2,527	2	15,263	921
1947	1,550	2,291	—	13,739	697
1948	898	1,168	—	12,363	565
1949	806	2,458	—	13,097	761
1950	421	911	—	12,429	718
1951	253	2,568	—	11,152	559
1952	190	4,755	—	10,506	509
1953	132	8,878	—	10,572	457
			Rates per 100,000 Population[1]		
Av. 1926-30	84·5	6·7	22·3	58·5	33·3
Av. 1931-35	31·1	6·5	2·6	78·1	22·7
Av. 1936-40	24·9	10·8	0·8	83·7	15·8
Av. 1941-45	24·9	6·8	0·1	109·7	10·1
1946	20·7	20·6	[2]	124·4	7·5
1947	12·4	18·3	—	109·7	5·6
1948	7·0	9·1	—	96·6	4·4
1949	6·0	18·3	—	97·6	5·7
1950	3·1	6·7	—	90·8	5·2
1951	1·8	18·4	—	79·7	4·0
1952	1·3	33·0	—	72·9	3·5
1953	0·9	60·2	—	71·6	3·1

[1] Based on official estimates of population (*see* p. 137).

[2] Less than 0·1 per 100,000 population.

3.—Reported Cases of Selected Notifiable Diseases, and Rates per 100,000 Estimated Population, by Province, 1953

Int. List No.	Disease	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
							Nubmers of Cases					
087	Chickenpox	162	266	1,918	58	9,657	20,872	1,507	2,816	3,333	6,869	47,458
055	Diphtheria	3	1	6	3	70	8	4	5	24	8	132
045-048	Dysentery[1]	—	19	—	—	133	176	28	51	46	589	1,042
046	Amœbic	—	*2*	—	—	*14*	*10*	—	*3*	*2*	*1*	*32*
045	Bacillary	—	*17*	—	—	*119*	*166*	*28*	*48*	*44*	*588*	*1,010*
082	Encephalitis, infectious[2]	—	—	6	—	—	10	12	12	2	4	46
480-483	Influenza, epidemic[3]	12	2,935	4,934	42	—	859	259	48	213	808	10,110
085	Measles	322	337	2,543	49	8,984	22,237	2,845	5,586	7,327	7,641	57,871
057·0	Meningitis, meningococcal	14	—	10	16	39	97	36	40	7	42	301
089	Mumps	112	202	2,426	323	6,166	14,778	1,042	1,514	1,665	8,069	36,297
080	Poliomyelitis, epidemic	233	11	31	88	488	2,239	2,317	1,202	1,472	797	8,878
086	Rubella (German measles)[4]	5	—	336	119	648	2,624	45	714	4,159	1,095	9,745
050	Scarlet fever	538	369[5]	61	473	3,592	3,448	494	903	1,956	2,220	14,054
084	Smallpox	—	—	—	—	—	—	—	—	—	—	—
001-019	Tuberculosis	467	63	151[6]	628[6]	4,094	1,412	878	576[7]	795	1,508	10,572
001, 002	Pulmonary	*450*	*38*	*137*	*619*	*3,957*	[8]	*871*	*406*	*719*	*1,350*	*8,547*
003-019	Non-pulmonary	*17*	*25*	*11*	*6*	*137*	[8]	*7*	*130*	*76*	*158*	*567*
040, 041	Typhoid and paratyphoid	17	—	2	31	294	51	—	11	18	33	457
044	Undulant fever[9]	—	1	—	4	89	19	12	2	2	5	134
020-039	Venereal diseases	497	38	620	218	4,821	3,174	1,350	1,481	2,723	3,285	18,207
020-029	Syphilis	*91*	*14*	*136*	*53*	*1,272*	*738*	*87*	*117*	*153*	*237*	*2,898*
030-035	Gonorrhœa	*406*	*24*	*481*	*165*	*3,549*	*2,432*	*1,261*	*1,363*	*2,570*	*3,039*	*15,290*
036-039	Other venereal diseases[10]	—	—	*3*	—	—	*4*	*2*	*1*	—	*9*	*19*
056	Whooping cough	10	70	1,370	29	3,920	1,570	212	390	1,100	716	9,387

For footnotes, *see* end of table.

3.—Reported Cases of Selected Notifiable Diseases, and Rates per 100,000 Estimated Population, by Province, 1953—concluded

Int. List No.	Disease	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
		RATES PER 100,000 POPULATION[11]										
087	Chickenpox	42·3	250·9	289·3	10·8	226·2	426·2	186·3	327·1	332·6	558·5	321·6
055	Diphtheria	0·8	0·9	0·9	0·6	1·6	0·2	0·5	0·6	2·4	0·7	0·9
045–048	Dysentery[1]	—	17·9	—	—	3·1	3·6	3·5	5·9	4·6	47·9	7·1
046	Amœbic	—	*1·9*	—	—	*0·3*	*0·2*	—	*0·3*	*0·2*	*0·1*	*0·2*
045	Bacillary	—	*16·0*	—	—	*2·8*	*3·4*	*3·5*	*5·6*	*4·4*	*47·8*	*6·8*
082	Encephalitis, infectious[2]	—	—	0·9	—	—	0·2	1·5	1·4	0·2	0·3	0·3
480–483	Influenza, epidemic[3]	3·1	2,768·9	744·2	7·8	—	17·5	32·0	5·6	21·3	65·7	68·5
085	Measles	84·1	317·9	383·6	9·1	210·4	454·1	351·7	648·8	731·2	621·2	392·2
057·0	Meningitis, meningococcal	3·7	—	1·5	3·0	0·9	2·0	4·4	4·6	0·7	3·4	2·0
089	Mumps	29·2	190·6	365·9	60·3	144·4	301·8	128·8	175·8	166·2	656·0	246·0
080	Poliomyelitis, epidemic	60·8	10·4	4·7	16·4	11·4	45·7	286·4	139·6	146·9	64·8	60·2
086	Rubella (German measles)[4]	1·3	—	50·7	22·2	15·2	53·6	5·6	82·9	415·1	89·0	66·0
050	Scarlet fever	140·5	348·1[5]	9·2	88·2	84·1	70·4	61·1	104·9	195·2	180·5	95·2
084	Small pox	—	—	—	—	—	—	—	—	—	—	—
001–019	Tuberculosis	121·9	59·4	22·8	117·2[6]	95·9	28·8	108·5	66·9[7]	79·3	122·6	71·6
001, 002	Pulmonary	*117·5*	*35·8*	*20·7*	*115·5*	*92·7*	[8]	*107·7*	*47·2*	*71·8*	*109·8*	*57·9*
003–019	Non-pulmonary	*4·4*	*23·6*	*1·7*	*1·1*	*3·2*	[8]	*0·9*	*15·1*	*7·6*	*12·8*	*3·8*
040, 041	Typhoid and paratyphoid	4·4	—	0·3	5·8	6·9	1·0	—	1·3	1·8	2·7	3·1
044	Undulant fever[9]	—	0·9	—	0·7	2·1	0·4	1·5	0·2	0·2	0·4	0·9
020–039	Venereal diseases	129·8	35·8	93·5	40·7	112·9	64·8	166·9	172·0	271·8	267·1	123·4
020–029	Syphilis	*23·8*	*13·2*	*20·5*	*9·9*	*29·8*	*15·1*	*10·8*	*13·6*	*15·3*	*19·3*	*19·6*
030–035	Gonorrhœa	*106·0*	*22·6*	*72·5*	*30·8*	*83·1*	*49·7*	*155·9*	*158·3*	*256·5*	*247·1*	*103·6*
036–039	Other venereal diseases[10]	—	—	*0·5*	—	—	*0·1*	*0·2*	*0·1*	—	*0·7*	*0·1*
056	Whooping cough	2·6	66·0	206·6	5·4	91·8	32·1	26·2	45·3	109·8	58·2	63·6

[1] Reporting not compulsory in Newfoundland and New Brunswick. [2] Reporting not compulsory in Newfoundland. [3] Reporting not compulsory in Newfoundland and Alberta. [4] Reporting not compulsory in New Brunswick and Manitoba. [5] Includes cases of septic sore throat. [6] Includes 3 cases where type was not specified. [7] Includes 40 cases where type was not specified. [8] Type not specified. [9] Reporting not compulsory in Prince Edward Island and New Brunswick. [10] Other venereal diseases include chancroid, granuloma inguinale and lymphogranuloma venereum. [11] Based on official estimates of population (*see* p. 137).

Section 4.—Hospital Statistics*

This Section presents a brief outline of hospital conditions in Canada.† For statistical purposes, hospitals are divided into three general classifications: hospitals, tuberculosis institutions and mental institutions. It is because mental illness and tuberculosis are major public health problems that statistics for hospitals treating these conditions are prepared independently of those for other hospitals. Hospitals, excluding mental and tuberculosis institutions, are classified on the basis of admission policy into public, private or federal. Public hospitals are further classified as "general" and "special" hospitals. Thus, statistics are collected for five groups of hospitals: public, private, federal, mental and tuberculosis.

The total number of hospitals reporting, classified by ownership and province, is shown in Table **4**. Table **5** classifies reporting public hospitals by type of service. Table **6** gives the capacity of hospitals reporting and Table **7** presents summary statistics of reporting public and private hospitals for a period of five years.

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* Prepared in the Institutions Section of the Health and Welfare Division, Dominion Bureau of Statistics.

† More detailed information may be found in DBS publications: *Annual Report of Hospitals, 1952*, Vols. I and II; *Mental Institutions, 1952; Tuberculosis Institutions, 1952.*

4.—Reporting Hospitals, classified by Ownership and Province, 1952

Ownership	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Federal	—	—	—	—	2	3	3	—	1	3	—	52[1]
Provincial	3	1	6	3	11	17	6	10	9	11	—	77
Municipal	—	—	24	4	—	20	40	117	55	3	—	263
Lay	—	5	29	16	38	129	14	7	5	59	—	302
Religious	—	2	10	15	82	41	16	27	37	26	7	263
Private	—	—	6	2	63	47	7	9	7	50	2	193
Totals	**3**	**8**	**75**	**40**	**196**	**257**	**86**	**170**	**114**	**152**	**9**	**1,150**[1]

[1] Includes 40 federal hospitals, figures for which are not available by provinces.

5.—Reporting Public Hospitals, classified by Type of Service and Province, 1952

Type of Service	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
General[1]	—	7	43	30	81	159	64	150	95	85	7	721
Special[1]	—	—	3	2	21	17	4	4	3	2	—	56
Mental[2]	1	1	18	1	15	20	4	4	6	5	—	75
Tuberculosis[2]	2	1	5	5	19	16	7	3	3	11	—	72
Totals	**3**	**9**	**69**	**38**	**136**	**212**	**79**	**161**	**107**	**103**	**7**	**924**

[1] Excludes federal hospitals. [2] Includes federal hospitals.

6.—Beds and Bassinets in Reporting Hospitals, classified by Type and Province, 1952

Type of Hospital	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public—												
General—												
Beds	—	640	2,956	1,837	13,262	19,609	3,670	5,113	5,545	6,766	418	59,816
Bassinets	—	136	557	311	1,747	3,543	769	936	1,000	1,002	18	10,019
Special—												
Beds	—	—	132	105	4,150	2,642	847	13	187	141	—	8,217
Bassinets	—	—	76	15	265	160	—	13	30	55	—	614
Private—												
Beds	—	—	19	48	917	858	141	26	94	1,228	20	3,351
Bassinets	—	—	17	16	297	141	12	19	14	15	2	533
Mental—												
Beds	530	250	2,672	1,100	16,280	15,415	2,557	2,928	3,506	3,653	—	48,891
Tuberculosis—[1]												
Beds	700	150	857	922	4,830	4,261	1,264	803	1,088	1,473	—	16,348
Totals, All Hospitals—[2]												
Beds	**1,230**	**1,040**	**6,636**	**4,012**	**39,439**	**42,785**	**8,479**	**8,883**	**10,420**	**13,261**	**438**	**136,623**
Bassinets	—	**136**	**650**	**342**	**2,309**	**3,844**	**781**	**968**	**1,044**	**1,072**	**20**	**11,166**

[1] Excludes 2,153 tuberculosis beds in general hospitals. [2] Excludes federal hospitals.

7.—Summary Statistics of Reporting Public and Private Hospitals, 1948-52

Item	1948	1949	1950	1951	1952
	No.	No.	No.	No.	No.
Public Hospitals—					
Hospitals reporting	696	738	761	778	777
Bed capacity[1]	68,003	71,210	75,691	79,339	78,666
Patients under care[2]	1,714,874	1,829,236	1,900,628	2,012,773	2,107,880
Patient days during year[2]	19,198,398	20,221,160	21,189,308	21,920,099	22,331,887
Private Hospitals—					
Hospitals reporting	209	194	225	220	187
Bed capacity[1]	3,997	3,722	4,593	4,638	3,884
Patients under care[2]	61,530	63,052	70,577	67,486	60,432
Patient days during year[2]	923,779	877,054	1,029,935	1,076,207	992,425

[1] Includes bassinets. [2] Includes newborn.

Subsection 1.—Statistics of Public Hospitals

Movement of patients and number of personnel in public hospitals are summarized in Table 8, and revenues and expenditures in Table **9**.

8.—Movement of Patients and Number of Personnel of Reporting Public Hospitals, by Province, 1952

Item	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Hospitals reporting	—	7	46	32	102	176	68	154	98	87	7	777
Movement of Patients—[1]												
Admissions	—	15,007	94,243	79,987	401,469	706,148	134,434	194,369	209,829	218,120	1,421	2,055,027
Total under care	—	15,414	96,766	81,670	413,599	724,281	137,498	199,220	214,183	223,516	1,733	2,107,880
Discharges	—	14,755	91,963	78,306	390,463	686,143	131,140	190,604	206,156	212,095	1,338	2,002,963
Deaths	—	354	2,170	1,715	10,686	19,505	3,072	3,883	3,469	5,729	50	50,633
Patient days during year	—	147,576	910,343	709,598	5,512,398	7,525,313	1,343,634	1,962,778	1,846,361	2,261,094	112,792	22,331,887
Personnel—[2]												
Salaried doctors, full-time	—	1	13	7	113	149	53	3	20	35	—	394
Interns	—	—	74	17	495	644	79	46	99	150	—	1,604
Graduate nurses	—	89	799	508	2,720	7,342	817	1,265	1,298	2,438	23	17,299
Student nurses	—	121	620	644	2,925	4,883	774	1,259	1,183	1,281	—	13,690
Other personnel	—	323	1,800	1,455	12,172	19,772	3,288	4,183	3,844	5,828	122	52,787
Totals, Personnel	—	**534**	**3,306**	**2,631**	**18,425**	**32,790**	**5,011**	**6,756**	**6,444**	**9,732**	**145**	**85,774**

[1] Includes newborn. [2] Includes part-time personnel except part-time salaried doctors.

9.—Finances of Reporting Public Hospitals, by Province, 1952

Item	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Hospitals reporting	—	5	44	31	76	174	63	149	96	85	—	723[2]
	$	$	$	$	$	$	$	$	$	$	$	$
Revenue—												
Net earnings from patients	—	679,650	4,610,539	5,323,674	30,020,964	65,360,216	9,290,366	16,271,598	12,626,834	26,882,058	—	171,065,899
Provincial and municipal grants	—	106,866	480,065	881,452	1,874,562	9,242,970	799,334	364,462	4,257,532	537,296	—	18,544,539
Other revenue	—	23,546	270,925	113,950	3,251,085	3,110,172	421,819	317,941	473,354	943,528	—	8,926,320
Totals, Revenue	—	**810,062**	**5,361,529**	**6,319,076**	**35,146,611**	**77,713,358**	**10,511,519**	**16,954,001**	**17,357,720**	**28,362,882**	—	**198,536,758**
Expenditure—												
Salaries and wages (net)	—	259,918	2,429,548	2,662,382	17,533,881	46,894,060	5,586,696	9,498,808	9,032,250	17,755,485	—	111,653,028
Direct expense	—	404,278	2,779,431	3,024,788	15,192,631	28,603,222	4,465,405	6,471,796	5,324,933	9,291,455	—	75,557,939
Other expenditure	—	158,739	415,218	673,428	3,758,838	5,423,396	882,456	1,163,466	2,839,318	1,515,393	—	16,830,252
Totals, Expenditure (net)	—	**822,935**	**5,624,197**	**6,360,598**	**36,485,350**	**80,920,678**	**10,934,557**	**17,134,070**	**17,196,501**	**28,562,333**	—	**204,041,219**
Cost per patient day[1]	—	7·65	7·57	9·00	8·64	10·75	8·36	8·74	9·34	12·50	—	9·86

[1] Includes newborn.

[2] 54 public hospitals reporting other information did not report finances.

Subsection 2.—Statistics of Mental Institutions

Data on movement of patients and personnel number for the 75 mental institutions that reported to the Dominion Bureau of Statistics in 1952 are given in Table **10**. Table **11** presents revenue and expenditure for 65 of those institutions; financial statistics were not reported by three municipal hospitals in Nova Scotia, two provincial hospitals in Quebec, one federal and one private hospital in each of Ontario and Quebec, and one psychiatric hospital in Saskatchewan.

Government and municipal payments made up 84·8 p.c. of all the revenue received by mental institutions and salaries accounted for 56·1 p.c. of the total maintenance expenditure. New buildings and improvements took 12·0 p.c. of the expenditure in 1952. Prince Edward Island, with only one institution reporting, was the only province showing no expenditure for this item. Ontario's outlay amounting to $5,070,039, accounted for 20·8 p.c. of all its 1952 expenditure for this purpose.

10.—Movement of Patients and Number of Personnel of Reporting Mental Institutions, by Province, 1952

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Institutions reporting	1	1	18	1	15	20	4	4	6	5	—	75
Movement of Patients—												
Admissions (excluding transfers)......	322	182	848	677	5,936	6,240	924	1,496	1,185	3,147	—	20,957
Patients under care.	698	292	2,558	1,736	17,856	20,798	3,465	4,911	3,721	4,977	—	61,012
Separations (excluding transfers)......	241	171	820	448	5,744	5,594	819	1,492	1,018	2,918	—	19,265
Patients at Dec. 31, 1952..............	779	303	2,586	1,965	18,048	21,444	3,570	4,915	3,888	5,206	—	62,704
Personnel—												
Medical staff, full-time (including interns)............	4	—	8	9	81	144	18	31	19	34	—	348
Medical staff, part-time (including interns)............	—	2	14	2	27	46	13	7	10	—	—	121
Registered nurses...	22	2	34	15	297	511	22	18	43	43	—	1,007
Other nurses........	179	48	248	182	1,572	3,140	470	764	617	1,327	—	8,547
Other personnel.....	133	51	308	143	1,529	1,864	310	519	482	515	—	5,854
Totals, Personnel..	**338**	**103**	**612**	**351**	**3,506**	**5,705**	**833**	**1,339**	**1,171**	**1,919**	—	**15,877**

11.—Finances of 65 Reporting Mental Institutions, by Province, 1952

Item	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	$	$	$	$	$	$
Revenue—						
Government and municipal payments.........	1,144,193	243,428	1,376,244	1,159,712	7,899,770	20,721,387
Paying patients...........	37,106	65,991	299,947	157,811	1,443,337	3,219,700
Other sources.............	2,302	—	68,442	2,731	855,151	502,638
Totals, Revenue.........	**1,183,601**	**309,419**	**1,744,633**	**1,320,254**	**10,198,258**	**24,443,725**
Expenditure—						
Salaries (net).............	494,220	123,627	773,158	687,269	3,994,302	12,083,220
Provisions (food).........	355,531	86,982	553,696	321,797	2,439,804	3,058,649
Other maintenance expenditure...............	317,567	98,810	547,553	298,490	3,098,549	4,217,256
Totals, Maintenance Expenditure...............	1,167,318	309,419	1,874,407	1,307,556	9,532,655	19,359,125
New buildings and improvements.............	16,283	—	208,506	12,698	780,271	5,070,039
Other expenditure.........	—	—	7,967	—	304,237	—
Totals, Non-maintenance Expenditure...........	16,283	—	216,473	12,698	1,084,508	5,070,039
Totals, Expenditure.....	**1,183,601**	**309,419**	**2,090,880**	**1,320,254**	**10,617,163**	**24,429,164**

11.—Finances of 65 Reporting Mental Institutions, by Province, 1952—concluded

Item	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	$	$	$	$	$	$
Revenue—						
Government and municipal payments	2,460,545	4,969,524	4,786,169	6,097,000	—	50,857,972
Paying patients	334,658	203,664	675,950	767,787	—	7,205,951
Other sources	86,447	307,123	68,834	25,455	—	1,919,123
Totals, Revenue	**2,881,650**	**5,480,311**	**5,530,953**	**6,890,242**	—	**59,983,046**
Expenditure—						
Salaries (net)	1,472,318	3,236,475	2,512,194	3,615,577	—	28,992,360
Provisions (food)	661,856	657,412	732,354	1,524,120	—	10,392,201
Other maintenance expenditure	581,944	951,161	565,386	1,589,778	—	12,266,494
Totals, Maintenance Expenditure	2,716,118	4,845,048	3,809,934	6,729,475	—	51,651,055
New buildings and improvements	35,138	124,475	867,725	79,456	—	7,194,591
Other expenditure	15,000	—	752,065	—	—	1,079,269
Totals, Non-maintenance Expenditure	50,138	124,475	1,619,790	79,456	—	8,273,860
Totals, Expenditure	**2,766,256**	**4,969,523**	**5,429,724**	**6,808,931**	—	**59,924,915**

Subsection 3.—Statistics of Tuberculosis Institutions

Table **12** shows that, of 18,501 beds in tuberculosis institutions, 21·7 p.c. were located in Federal Government sanatoria and in tuberculosis units of the Federal Government and general public hospitals. Movement-of-patients statistics in Table **13** include data from these hospitals and units but the financial statistics given in Table **14** are for public sanatoria only.

12.—Bed Complement of Tuberculosis Institutions and Units, by Province, 1952

Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Public sanatoria	700	150	857	922	4,610	4,087	788	803	600	973	—	14,490
Federal Government sanatoria	—	—	—	—	220	174	476	—	488	500	—	1,858
Units in public hospitals	88	—	198	—	728	—	—	—	—	10	363	1,387
Units in Federal Government hospitals	—	—	150	94	231	151	15	25	—	100	—	766
Totals, Bed Complement	788	**150**	**1,205**	**1,016**	**5,789**	**4,412**	**1,279**	828	**1,088**	**1,583**	**363**	**18,501**

13.—Movement of Patients, Personnel and Facilities of Tuberculosis Institutions and Units,[1] by Province, 1952

Item	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Movement of Patients—						
Admissions	345	178	1,919	1,566	6,442	3,973
Discharges[2]	309	163	1,893	1,495	6,009	3,808
Deaths	17	19	56	52	438	255
Patients under care	755	324	2,790	2,405	11,558	8,234
Collective stay in days	148,707	51,290	319,496	319,649	1,897,582	1,556,950
Personnel—[3]						
Salaried doctors	12	3	22	22	209	90
Graduate nurses	55	19	83	79	338	398
Other personnel	420	101	566	408	2,119	2,264
Totals, Personnel	**487**	**123**	**671**	**509**	**2,666**	**2,752**
Hospital Facilities—[3]						
X-ray	2	—	4	1	14	6
Clinical laboratory	2	—	3	1	14	8
Physiotherapy	—	1	1	—	6	2

Item	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Movement of Patients—						
Admissions	1,577	875	903	1,506	169	19,453
Discharges[2]	1,536	781	745	1,282	96	18,117
Deaths	82	37	77	145	27	1,205
Patients under care	2,729	1,608	1,800	2,841	325	35,369
Collective stay in days	423,009	283,306	348,752	505,657	65,231	5,919,629
Personnel—[3]						
Salaried doctors	31	19	31	48	—	487
Graduate nurses	58	70	139	232	—	1,471
Other personnel	773	473	580	1,097	—	8,801
Totals, Personnel	**862**	**562**	**750**	**1,377**	—	**10,759**
Hospital Facilities—[3]						
X-ray	5	1	2	2	—	37
Clinical laboratory	6	1	2	3	—	40
Physiotherapy	2	1	1	1	—	15

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[1] Includes 94 out of 106 operating institutions, representing 95·9 p.c. of total bed complement.

[2] Includes deaths.

[3] Sanatoria only.

14.—Finances of Public Tuberculosis Sanatoria, by Province, 1952

(Exclusive of Federal Government sanatoria)

Item	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta[2]	British Columbia[2]	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Sanatoria reporting	2	1	4	4	18	14	4	3	2	6	—	58
	$	$	$	$	$	$	$	$	$	$	$	$
Revenue—												
Government and municipal grants and payments	1,284,477	233,807	1,483,517	1,709,341	5,848,656	6,660,277	1,174,469	2,113,416	1,319,628	3,339,106	—	25,166,694
Paying patients	—	41,494	—	37	377,247	262,345	39,409	—	826	—	—	721,358
Other sources	—	8,809	6,404	36,945	839,341	1,413,358	87,726	41,967	61,718	202,067	—	2,698,335
Totals, Revenue	**1,284,477**	**284,110**	**1,489,921**	**1,746,323**	**7,065,244**	**8,335,980**	**1,301,604**	**2,155,383**	**1,382,172**	**3,541,173**	—	**28,586,387**
Expenditure—												
Salaries and wages	570,228	151,933	724,767	754,238	3,169,994	4,369,879	698,989	1,132,857	906,648	1,795,192	—	14,274,725
Supplies	783,559	112,216	734,746	609,643	2,916,037	2,473,960	472,396	492,796	398,872	856,803	—	9,851,028
Other expenditure	104,613	24,772	30,404	390,118	1,571,077	1,341,656	163,181	466,522	76,646	889,177	—	5,058,166
Totals, Expenditure	**1,458,400**	**288,921**	**1,489,917**	**1,753,999**	**7,657,108**	**8,185,495**	**1,334,566**	**2,092,175**	**1,382,166**	**3,541,172**	—	**29,183,919**
Cost per patient day[1]	6·63	5·63	6·54	7·00	4·79	5·58	5·34	7·38	7·25	11·23	—	5·94

[1] Excludes perquisites, out-patient expenditure and non-operating expenditure.

[2] Includes all institutions operated by the Provincial Division of Tuberculosis Control.

Subsection 4.—Statistics of Federal Government Hospitals

Hospitals operated by the Federal Government are conducted for special purposes connected with departmental administration, such as care of war veterans and members of the Armed Forces, quarantine and care of immigrants and lepers, care of Indians, etc. Table **15** gives a composite picture of the activities of Federal Government departments in the hospital field in 1952.

15.—Summary Statistics of Federal Government Hospitals, 1952

Item	Department of Veterans Affairs	Department of National Defence	Department of National Health and Welfare		Total
			Indian Health Services	Quarantine and Sick Mariners	
	No.	No.	No.	No.	No.
Hospitals reporting[1]	18	8	10	6	42
Beds—					
General	7,151	850	348	128	8,477
Tuberculosis	406	—	17	175	598
Mental	1,550	—	—	—	1,550
Other	667	—	—	34	701
Totals, Beds	9,774	850	365	337	11,326
Personnel—					
Salaried doctors	115	52	16	9	192
Graduate nurses	1,533	121	49	51	1,754
Other personnel	7,166	347	92	108	7,713
Totals, Personnel	8,814	520	157	168	9,659
Facilities—					
Laboratory	13	8	7	3	31
Radiology	14	8	6	1	29
Physiotherapy	17	8	1	2	28
Out-patient service	12	8	10	3	33
Movement of Patients—					
In hospital at beginning of year	7,445	279	227	206	8,157
Admissions	50,543	13,528	5,450	1,507	71,028
Totals under care	57,988	13,807	5,677	1,713	79,185
Discharges	49,054	13,508	5,345	1,473	69,380
Deaths	1,907	9	132	30	2,078
In hospital at end of year	7,027	290	200	210	7,727
Live births during year	—	—	668	—	668
Patient days during year	2,849,933	172,852	158,480	77,717	3,258,982
Average daily number of patients	7,786·7	472·2	433·0	212·3	8,904·3
Percentage occupancy	79·7	55·6	118·6	63·0	78·6

[1] Excludes one Veterans Affairs hospital and nine Indian Health Services hospitals primarily or solely operated for the treatment of tuberculosis.

PART II.—PUBLIC WELFARE AND SOCIAL SECURITY*

Responsibility for social welfare in Canada has rested in large part on the provinces which, in turn, have delegated an important share of this responsibility to the municipalities. While constitutional authority has not changed, except with respect to unemployment insurance and old age pensions, the financial participation of the Federal Government has been greatly extended in the past two decades in the provision of income maintenance payments.

The creation of the Department of National Health and Welfare in 1944 established for the first time in the Federal Government a department in which public welfare is a major responsibility. The Department is charged with the administration of federal Acts relating to welfare which are not assigned by law to other departments. In addition to the general promotion of social welfare, the Welfare Branch of the Department administers the family allowances program, the old age security program and the federal aspects of old age assistance, allowances for blind persons and the new program of aid to disabled persons. Grants to the provinces to promote physical fitness were introduced in 1943, but the Act providing for them was repealed in June 1954.

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* Except as otherwise indicated, this Part was prepared in the Research Division, Department of National Health and Welfare, Ottawa.

Unemployment insurance is administered by the Unemployment Insurance Commission; welfare and health services for veterans by the Department of Veterans Affairs; and the welfare of Indians and Eskimos by the Department of Citizenship and Immigration and the Department of Northern Affairs and National Resources, respectively.

Administration and financial responsibility in other fields of welfare, such as mothers' allowances, child protection and general assistance or relief, are left entirely to the provinces and their local subdivisions.

Section 1.—Federal Government Programs

Subsection 1.—Family Allowances

The Family Allowances Act was introduced in 1944 as a basic social security measure designed to assist in providing equal opportunity for all Canadian children. The allowances involve no means test and are paid entirely out of the Federal Consolidated Revenue Fund. They are not part of taxable income, although persons with children eligible for family allowances obtain a smaller income tax exemption for such children than for children not so eligible.

Allowances are payable in respect of every child under the age of 16 years who was born in Canada or has been a resident of the country for one year, or whose father or mother was domiciled in Canada for three years immediately prior to the birth of the child. Monthly payment is made normally to the mother although any person who substantially maintains the child may be paid the allowance on his behalf. The allowances are paid at the monthly rate of $5 for each child under 6 years; $6 for each child from 6 to 9 years; $7 for each child from 10 to 12 years; and $8 for each child from 13 to 15 years. The allowances are paid by cheque, except for Eskimo children and a group of Indian children for whom payment is made largely in kind because of lack of exchange facilities in remote areas and the need for education in the use of nutritive foods.

If it is satisfactorily shown to the authorities that the allowances are not being spent for the purpose outlined in the Act, payment may be discontinued or made to some other person or agency on behalf of the child. Allowances are not payable for any child who fails to comply with provincial school regulations or on behalf of a girl who, although she is under 16 years of age, is married.

Family allowances are administered by the National Director of Family Allowances of the Department of National Health and Welfare through Regional Directors in offices located in each provincial capital. A Welfare Section in each regional office deals with welfare questions arising out of the administration of allowances. A Supervisor of Welfare Services advises each Regional Director and reports through him to the Chief Supervisor of Welfare Services, who acts in a similar advisory capacity to the National Director. The actual preparing and issuing of the cheques is the responsibility of the treasury division of each regional office which reports to the Chief Treasury Officer of the Department of Finance with the Department of National Health and Welfare.

The Regional Director for the Yukon and Northwest Territories, located at Ottawa, is responsible for payments to families in those areas. Close co-operation is maintained with the Departments of Citizenship and Immigration and of Northern Affairs and National Resources which are responsible for the welfare of Indians and Eskimos, respectively (*see* Population Chapter, pp. 159 and 160).

1.—Family Allowance Statistics, by Province, Years Ended Mar. 31, 1952-54

Province or Territory	Year Ended Mar. 31–	Families Receiving Allowance in March	Children for Whom Allowance Paid in March	Average Number of Children per Family in March	Average Allowance—[1]		Net Total Allowances Paid During Fiscal Year
					per Family	per Child	
		No.	No.	No.	$	$	$
Newfoundland	1952	52,552	150,995	2·87	17·11	5·96	10,613,908
	1953	53,800	157,280	2·92	17·43	5·96	11,038,874
	1954	55,102	163,292	2·96	17·70	5·97	11,497,719
Prince Edward Island	1952	13,248	34,698	2·62	15·73	6·01	2,495,987
	1953	13,207	35,060	2·65	15·99	6·02	2,522,830
	1954	13,205	35,441	2·68	16·22	6·04	2,558,097
Nova Scotia	1952	93,051	222,664	2·39	14·43	6·03	15,949,541
	1953	94,414	227,698	2·41	14·56	6·04	16,297,170
	1954	95,715	233,076	2·43	14·73	6·05	16,716,374
New Brunswick	1952	73,167	195,355	2·67	15·99	5·99	13,892,907
	1953	74,426	201,240	2·70	16·23	6·00	14,287,535
	1954	75,189	205,785	2·74	16·50	6·03	14,700,819
Quebec	1952	542,651	1,454,369	2·68	16·08	6·00	102,883,812
	1953	564,219	1,507,272	2·67	16·12	6·03	107,084,124
	1954	585,050	1,562,685	2·67	16·20	6·06	111,441,301
Ontario	1952	651,272	1,327,304	2·04	12·20	5·98	93,207,144
	1953	681,870	1,405,125	2·06	12·35	5·99	98,303,868
	1954	712,592	1,489,030	2·09	12·54	6·00	104,409,819
Manitoba	1952	110,466	235,347	2·13	12·78	6·00	16,703,467
	1953	113,329	244,376	2·16	12·93	6·00	17,283,660
	1954	116,238	253,803	2·18	13·11	6·00	17,979,854
Saskatchewan	1952	119,006	267,625	2·25	13·64	6·06	19,424,562
	1953	120,781	272,958	2·26	13·73	6·07	19,723,352
	1954	123,753	281,344	2·27	13·80	6·07	20,244,540
Alberta	1952	140,497	303,646	2·16	12·99	6·01	21,573,430
	1953	147,006	320,934	2·18	13·12	6·01	22,575,584
	1954	154,258	339,803	2·20	13·24	6·01	23,958,080
British Columbia	1952	166,734	329,130	1·97	11·81	5·98	23,063,643
	1953	173,993	347,610	2·00	12·02	6·02	24,399,859
	1954	181,241	367,834	2·03	12·26	6·04	25,904,496
Yukon and Northwest Territories	1952	4,077	9,053	2·22	13·26	5·97	649,273
	1953	4,296	9,619	2·24	13·67	6·10	680,828
	1954	4,366	9,951	2·28	13·94	6·11	702,801
Canada	**1952**	**1,966,721**	**4,530,186**	**2·30**	**13·82**	**6·00**	**320,457,673**
	1953	**2,041,341**	**4,729,172**	**2·32**	**13·94**	**6·02**	**334,197,685**
	1954	**2,116,709**	**4,942,044**	**2·33**	**14·08**	**6·03**	**350,113,902**

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[1] Based on gross payments for March.

Subsection 2.—Old Age Security*

Under the Old Age Security Act (R.S.C. 1952, c. 200), effective January 1952, a universal pension of $40 a month is payable by the Federal Government to all persons aged 70 or over, subject only to a residence qualification. Residence requirement is 20 years immediately preceding commencement of pension with certain temporary absences allowed. Where the applicant has not so resided for the complete 20 years, the periods of absence may be made up by having been present in Canada, prior to the 20-year period, for double the periods of absence; for these persons, there is a further requirement of one year's residence immediately preceding the commencement of the pension.

Payment of the pension is suspended when the pensioner leaves Canada. On his return, the pension may be resumed and, in the case of absences not exceeding six months, payment may then be made retroactively for as many as three months of absence in any calendar year.

The program is financed on a pay-as-you-go basis. Payment of the pension is made from the Consolidated Revenue Fund and charged to the Old Age Security Fund account. The income of the Old Age Security Fund is derived from three sources. First, there is a 2-p.c. tax on personal taxable income, that is, on income less exemptions and deductions; the maximum tax per person is $60 per annum. The fund also receives the amount collected by a special 2-p.c. tax on corporate taxable income and the proceeds of a 2-p.c. sales tax. Temporary loans may be made to the Old Age Security Fund, subject to repayment as directed. Operations of the Fund for the first three years are shown in Table **2**.

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* The Old Age Pensions Act of 1927, under which old age pensions were paid jointly by the Federal and Provincial Governments, ceased to be effective Dec. 31, 1951, at which time all recipients thereunder were automatically transferred to the rolls of the universal pension under the Old Age Security Act, 1951. A description of the provisions of the Old Age Pensions Act of 1927 will be found in the 1951 Year Book, pp. 234-236, and statistics of operation for the years ended Mar. 31, 1950 and 1951, and the nine months ended Dec. 31, 1951, are given in the 1952-53 Year Book, pp. 264-265.

2.—Operations of the Old Age Security Fund, Years Ended Mar. 31, 1952,[1] 1953 and 1954

Item	Year Ended Mar. 31—		
	1952[1]	1953	1954
	$	$	$
Revenue			
Taxes—			
Individual income	100,000	45,250,000	90,700,000
Corporation income	2,000,000	36,850,000	55,600,000
Sales	24,297,979	141,558,292	146,832,886
Grant from Consolidated Revenue	49,668,855	—	—
Loan from Consolidated Revenue	—	99,483,322[2]	45,837,905
Totals, Revenue	**76,066,835**	**323,141,614**	**338,970,791**
Expenditure			
Totals, Expenditure (Benefit Payments)	**76,066,835**	**323,141,614**	**338,970,791**

[1] Program in effect for the last three months only of the fiscal year. [2] In the Budget Speech of Apr. 6, 1954, it was announced that this sum was being written off against the reserve for possible losses on active assets.

The program is administered by the National Director of Old Age Security of the Department of National Health and Welfare through the ten regional offices established in connection with the payment of family allowances. The two programs are administered largely by the same personnel.

Persons in receipt of old age assistance who reach age 70 are transferred to the universal pension rolls without further action on their part. Other persons make application to the Regional Director located at their provincial capital. The Regional Director for the Yukon and Northwest Territories is located at Ottawa.

In Alberta, British Columbia and Saskatchewan, the provincial governments make supplementary payments to recipients of old age security who qualify under a means and residence test. In Alberta and British Columbia the allowance cannot exceed $15 per month; in Saskatchewan, it is a flat $2.50 per month. In some provinces and in the Yukon, recipients of the pension who are in special need may also receive relief.

3.—Old Age Security Statistics, by Province, Years Ended Mar. 31, 1952,[1] 1953 and 1954

Province and Year	Pensioners in March	Pensions Paid (net)	Province or Territory and Year	Pensioners in March	Pensions Paid (net)
	No.	$		No.	$
Newfoundland—			Manitoba—		
1952[1]	14,177	1,697,080	1952[1]	37,826	4,457,480
1953	14,792	6,995,760	1953	40,489	19,019,960
1954	15,343	7,242,820	1954	42,592	20,052,895
Prince Edward Island—			Saskatchewan—		
1952[1]	6,338	754,720	1952[1]	37,153	4,399,120
1953	6,553	3,155,700	1953	40,553	19,037,305
1954	6,669	3,203,780	1954	42,505	20,111,120
Nova Scotia—			Alberta—		
1952[1]	34,832	4,124,080	1952[1]	36,637	4,333,120
1953	36,150	17,259,287	1953	40,203	18,745,260
1954	36,961	17,702,477	1954	42,868	20,137,730
New Brunswick—			British Columbia—		
1952[1]	24,540	2,935,240	1952[1]	72,225	8,543,040
1953	25,689	12,254,680	1953	79,464	36,802,800
1954	26,288	12,606,600	1954	85,191	39,880,100
Quebec—			Yukon and N.W.T.—		
1952[1]	139,954	16,579,994	1952[1]	406	48,040
1953	147,833	69,570,127	1953	447	217,720
1954	152,682	72,032,527	1954	469	225,520
Ontario—			**Canada—**		
1952[1]	238,925	28,194,920	**1952[1]**	**643,013**	**76,066,834**
1953	253,954	120,083,015	**1953**	**686,127**	**323,141,614**
1954	264,831	125,775,222	**1954**	**716,399**	**338,970,791**

[1] Program in effect for last three months only of the fiscal year.

Subsection 3.—Government Annuities*

Under the Government Annuities Act (R.S.C. 1952, c. 132) passed in 1908, the Federal Government carries on a service to assist Canadians to make provision for old age. The Act is administered by the Minister of Labour.

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* Revised in the Government Annuities Branch, Department of Labour, Ottawa.

A Canadian Government annuity is a fixed yearly income purchased from and paid by the Government of Canada. The annuity is payable in monthly instalments for life, or for life and guaranteed for a period of years. The minimum annuity is $10 and the maximum $1,200 a year or the actuarial equivalent if the annuity is to reduce by the amount of payments under the Old Age Security Act. Annuity contracts may be deferred or immediate. Deferred annuities are purchased by periodic or single premiums. Immediate annuity contracts provide immediate income. Annuities may now be arranged to reduce by $40 per month at age 70, to fit in with payments under the Old Age Security Act.

The property and interest of the annuitant are neither transferable nor attachable. In the event of the death of the annuitant before a deferred annuity vests, all money paid is refunded with interest to the purchaser or his legal representative. Provision is made in the Act for group annuity contracts, whereby employers may contract for the purchase of annuities on behalf of their employees, or associations on behalf of their members, the purchase money being derived partly from wages and partly from employer contributions. Group annuity plans now in effect cover a variety of industries and many municipal corporations throughout Canada. Annuities arising from individual contracts are taxable as to the interest portion of the annuity payment and the return-of-capital portion is exempt; annuities arising from approved pension plans are fully taxable but the employee and the employer are entitled to tax exemption year by year on their annual contributions to the pension plan.

From Sept. 1, 1908, the date of the inception of the system, to Mar. 31, 1954, the total number of annuity contracts and certificates issued, excluding replacements, was 368,690. On the latter date, 64,405 annuities were being paid amounting to $30,281,536 annually, and 261,277 deferred annuities were being purchased. The total amount of purchase money received up to Mar. 31, 1954, was $837,667,308.

Up to Mar. 31, 1954, 949 corporations, institutions and associations, as compared with 940 up to Mar. 31, 1953, had entered into agreements with the Government to purchase annuities. Under these agreements, 147,523 employees or members were holding certificates for purchase of deferred annuities as compared with 137,537 one year earlier. The number of certificates issued under groups in the year 1953-54 was 13,161 as compared with 13,634 in the previous year.

4.—Government Annuities Contracted and Purchase Money Received, Years Ended Mar. 31, 1935-54

NOTE.—Figures for 1909 to 1934 will be found in the 1942 Year Book, p. 873.

Year	Contracts and Certificates	Purchase Money Received	Year	Contracts and Certificates	Purchase Money Received
	No.	$		No.	$
1935	3,930	13,376,400	1945	15,796	33,076,436
1936	6,357	21,281,981	1946	25,538	46,954,536
1937	7,806	23,614,824	1947	43,585	72,009,764
1938	5,724	13,550,483	1948	40,945	75,067,827
1939	8,518	18,189,319	1949	36,332	64,311,116
1940	9,014	20,001,533	1950	21,078	63,133,242
1941	11,994	18,803,645	1951	21,775	59,648,323
1942	8,593	19,630,645	1952	17,038	57,548,671
1943	9,608	20,415,365	1953	18,433	62,787,282
1944	19,354	26,600,098	1954	18,466	64,380,327

5.—Government Annuities Fund Statements, Years Ended Mar. 31, 1950-54

Item	1950	1951	1952	1953	1954
	$	$	$	$	$
Assets					
Fund at beginning of fiscal year	501,737,659	563,182,111	620,398,995	675,931,703	736,540,927
Receipts during the year, less payments	61,444,452	57,216,884	55,532,708	60,609,224	61,913,087
Fund at end of fiscal year	563,182,111	620,398,995	675,931,703	736,540,927	798,454,014
Liabilities					
Value of outstanding contracts	563,182,111	620,398,995	675,931,703	736,540,927	798,454,014
Receipts					
Immediate annuities	8,500,020	6,954,048	4,437,155	5,823,356	5,620,132
Deferred annuities	55,165,127	53,101,159	53,438,891	57,347,618	59,580,358
Interest on fund	20,504,145	22,680,245	24,671,668	26,994,535	29,306,356
Amount transferred to maintain reserve	1,255,772	659,787	940,138	743,616	98,911
Totals, Receipts	**85,425,064**	**83,395,239**	**83,487,852**	**90,909,125**	**94,605,757**
Payments					
Payments under vested annuity contracts	22,031,613	23,964,819	25,820,310	27,693,728	29,749,159
Return of premiums with interest	1,417,094	1,806,652	1,807,459	2,222,482	2,123,349
Return of premiums without interest	531,905	406,884	327,375	383,691	820,162
Totals, Payments	**23,980,612**	**26,178,355**	**27,955,144**	**30,299,901**	**32,692,670**

6.—Numbers and Values of Annuity Contracts, as at Mar. 31, 1953 and 1954

Classification	1953			1954		
	Contracts	Amount of Annuities	Value, at Mar. 31, of Contracts in Force	Contracts	Amount of Annuities	Value, at Mar. 31, of Contracts in Force
	No.	$	$	No.	$	$
Immediate ordinary	25,355	9,839,736	91,521,234	27,096	10,555,822	96,652,531
Immediate guaranteed	31,521	16,277,276	186,165,210	32,482	17,177,733	193,635,041
Immediate last survivor	4,362	2,101,000	28,204,383	4,354	2,111,219	28,072,800
Immediate reducing at age 70	—	—	—	473	436,762	3,923,440
Deferred	246,724	[1]	430,650,100	261,277	[1]	476,170,202
Totals	**207,962**	**28,218,012**	**736,540,927**	**325,682**	**30,281,536**	**798,454,014**

[1] Undetermined.

Subsection 4.—Other Federal Government Programs

Unemployment Insurance and National Employment Service.—In 1940, by an amendment to the British North America Act, the Federal Government was given jurisdiction in the field of unemployment insurance and the Unemployment Insurance Act was passed, establishing a national system of unemployment insurance which is outlined in Chapter XVIII.

The National Employment Service is operated in conjunction with the unemployment insurance scheme. It is administered through local employment and claims offices and supervised by the Department of Labour. Statistics of positions offered and placements made are given in Chapter XVIII.

Prairie Farm Assistance.—The Prairie Farm Assistance Act is administered by the Department of Agriculture; a description of the legislation is given in Chapter IX.

Welfare Services for Indians and Eskimos.—The welfare of Indians and Eskimos is administered by the Department of Citizenship and Immigration and the Department of Northern Affairs and National Resources, respectively; this field is covered in the Population Chapter, pp. 159 and 160.

Section 2.—Federal-Provincial Programs

Subsection 1.—Old Age Assistance

The Old Age Assistance Act (R.S.C. 1952, c. 199), effective January 1952, provides for federal financial aid to the provinces for assistance, not exceeding $40 a month, to persons aged 65 or over subject to a residence qualification of at least 20 years. The payment of old age security commencing at age 70, makes old age assistance effective from ages 65 to 69. Within the limits of the federal Act each province is free to fix the amount of the maximum assistance payable, the maximum income allowed and other conditions of eligibility. The Federal Government's contribution per recipient cannot exceed 50 p.c. of $40 per month or of the assistance paid, whichever is less.

For an unmarried person the total income allowed, including assistance, cannot exceed $720 a year; for a married couple, $1,200 a year; where the spouse is blind within the meaning of the Blind Persons Act, the total income of the couple cannot exceed $1,320 a year. The exact pension payable in each case depends on the amount of outside income and the resources of the applicant and his spouse. To be eligible for assistance the applicant must not be in receipt of an allowance under the Blind Persons Act or the War Veterans Allowance Act. The applicant must have resided in Canada for at least 20 years immediately preceding the commencement of the assistance, but may have certain temporary absences; where the applicant has not so resided for the 20 years he must have been physically present in Canada, prior to the 20 years, for a total period equal to twice the total of the absences during the 20 years.

Implementation of the program in any province is contingent upon the province passing enabling legislation and signing an agreement with the Federal Government. The program became effective in January 1952 in all areas except Newfoundland, Yukon Territory and the Northwest Territories where the effective date was Apr. 1, 1952. The maximum assistance is $40 per month in all provinces and territories, except in Newfoundland where it is $30 per month.

Administrative responsibility for the program is vested in the province; the provincial plan for such administration must be approved by, and cannot be changed except with the consent of, the Governor in Council. Assistance is paid by the province with federal reimbursement made through the Department of National Health and Welfare. The Old Age Assistance Division of that Department administers the federal aspects of the program.

In Alberta, British Columbia and the Yukon Territory, the provincial or territorial governments make supplementary payments to recipients of old age assistance who qualify under a means and residence test. In Alberta and British Columbia the allowance cannot exceed $15 per month, while in the Yukon it cannot exceed $10 per month. In some provinces, recipients of old age assistance who are in special need may also receive relief.

7.—Old Age Assistance Statistics, by Province, Years Ended Mar. 31, 1952,[1] 1953 and 1954

Province or Territory	Year	Recipients in Month of March	Average Amount of Assistance Monthly	P.C. of Recipients to Population Age 65-69[2]	Federal Government Contribution During Year
		No.	$	p.c.	$
Newfoundland	1953[3]	5,037	29·14	55·35	833,898
	1954	5,124	29·21	55·70	896,429
Prince Edward Island	1952[1]	305	21·72	8·97	6,532
	1953	551	24·07	16·21	66,313
	1954	594	25·88	16·97	85,986
Nova Scotia	1952[1]	2,271	34·09	11·53	95,673
	1953	4,789	33·49	24·56	893,059
	1954	5,173	33·47	26·53	1,028,756
New Brunswick	1952[1]	3,237	36·91	22·64	165,638
	1953	5,371	36·83	37·30	1,113,921
	1954	5,756	36·93	39·42	1,248,339
Quebec	1952[1]	12,267	38·61	12·80	690,081
	1953	30,490	37·59	31·18	6,927,593
	1954	32,391	37·50	32·39	7,187,259
Ontario	1952[1]	12,697	37·28	8·04	672,512
	1953	20,401	36·95	12·75	4,586,572
	1954	21,587	36·83	13·36	4,726,153
Manitoba	1952[1]	1,239	38·45	4·47	106,690
	1953	4,400	38·03	15·71	1,036,021
	1954	4,838	37·77	17·16	1,112,322
Saskatchewan	1952[1]	2,497	36·93	8·55	133,393
	1953	4,206	36·65	14·35	997,396
	1954	4,584	36·71	15·81	1,017,535
Alberta	1952[1]	2,954	37·36	9·88	144,051
	1953	4,688	36·96	15·68	967,948
	1954	5,014	36·60	16·60	1,107,190
British Columbia	1952[1]	4,134	38·28	7·80	262,668
	1953	7,685	37·56	14·55	1,701,854
	1954	8,144	37·72	15·60	1,863,052
Yukon Territory	1953[3]	—	—	—	—
	1954	4	40·00	2·15	880
Northwest Territories	1953[3]	57	38·68	33·14	4,257
	1954	64	38·40	37·21	14,251
Canada	**1952[1],[4]**	**41,601**	**37·47**	**9·45**	**2,277,238**
	1953	**87,675**	**36·57**	**19·74**	**19,128,837**
	1954	**93,273**	**36·50**	**20·80**	**20,288,152**

[1] Program in effect only for the last three months of the fiscal year. [2] Estimated population as at June 1 of each year for the Provinces and 1951 Census data for the Territories. [3] Program became effective on Apr. 1, 1952. [4] Exclusive of Newfoundland and the Yukon and Northwest Territories.

Subsection 2.—Allowances for the Blind

The Blind Persons Act (R.S.C. 1952, c. 17), effective January 1952, provides for financial aid to the provinces toward the provision of allowances not exceeding $40 a month to blind persons aged 21 or over, subject to a residence qualification of at least 10 years. Within the limits of the federal Act, each province is free to fix the amount of the maximum allowance payable and the maximum income allowed. The Federal Government's contribution per recipient cannot exceed 75 p.c. of $40 per month or of the allowance paid, whichever is less.

For an unmarried person, the total income allowed, including the allowance, cannot exceed $840 a year; for an unmarried person with one or more dependent children, $1,040; for a married couple, $1,320 a year; where the spouse is also blind within the meaning of the Blind Persons Act, the total income of the couple cannot exceed $1,440 a year. The exact allowance payable in each case depends on the amount of outside income and the resources of the applicant and his spouse. To be eligible for an allowance the applicant must not be in receipt of assistance under the Old Age Assistance Act, of an allowance under the War Veterans Allowance Act, of a pension under the Old Age Security Act or of a pension in respect of blindness under the Pensions Act. The applicant must have resided in Canada for at least 10 years immediately preceding the commencement of the allowance but may have certain temporary absences; where the applicant has not so resided for the 10 years, he must have been physically present in Canada, prior to the 10 years, for a total period equal to twice the total of the absences during the 10 years.

Implementation of the program in any province is contingent upon the province passing enabling legislation and signing an agreement with the Federal Government. The program became effective in January 1952 in all provinces and in the Yukon and Northwest Territories.

Administrative responsibility for the program is vested in the province; the provincial plan for such administration must be approved by, and cannot be changed except with the consent of, the Governor in Council. The allowances are paid by the province with federal reimbursement made through the Department of National Health and Welfare. The Old Age Assistance Division of that Department administers the federal aspects of the program.

In Alberta, British Columbia, Saskatchewan and the Yukon Territory, the provincial or territorial governments make supplementary payments to recipients of allowances for the blind who qualify under a means and residence test. In Alberta and British Columbia the allowance cannot exceed $15 per month; in Saskatchewan it is a flat $2.50 per month; in the Yukon it cannot exceed $10 per month. In some provinces recipients of the allowance who are in special need may also receive relief.

8.—Statistics of Allowances for the Blind, by Province, Years Ended Mar. 31, 1952,[1] 1953 and 1954

Province or Territory and Year		Recipients in Month of March	Average Amount of Assistance Monthly	P.C. of Recipients to Population Age 20-69[2]	Federal Government Contribution During Year
		No.	$	p.c.	$
Newfoundland	1952[1]	321	39·26	0·178	28,237
	1953	336	39·88	0·183	117,937
	1954	336	39·49	0·177	121,952
Prince Edward Island	1952[1]	75	38·10	0·141	6,460
	1953	79	37·83	0·145	26,681
	1954	90	37·12	0·166	28,126
Nova Scotia	1952[1]	734	38·69	0·210	64,199
	1953	722	38·54	0·204	253,718
	1954	718	38·35	0·201	250,567
New Brunswick	1952[1]	783	39·25	0·292	69,186
	1953	750	39·85	0·276	273,941
	1954	731	39·49	0·265	263,726
Quebec	1952[1]	3,013	39·48	0·132	271,902
	1953	3,041	39·23	0·131	1,104,180
	1954	2,949	38·96	0·124	1,057,842
Ontario	1952[1]	1,604	39·20	0·056	142,984
	1953	1,751	38·87	0·060	632,329
	1954	1,710	38·70	0·057	602,041
Manitoba	1952[1]	401	39·37	0·086	35,949
	1953	430	39·24	0·092	153,549
	1954	411	38·92	0·086	148,244
Saskatchewan	1952[1]	343	39·25	0·072	30,667
	1953	342	39·22	0·071	123,692
	1954	366	38·73	0·075	125,796
Alberta	1952[1]	378	38·89	0·068	33,767
	1953	383	39·31	0·067	133,822
	1954	400	38·57	0·069	135,586
British Columbia	1952[1]	426	39·25	0·059	37,827
	1953	485	39·19	0·066	162,910
	1954	488	39·20	0·066	174,964
Yukon Territory	1952[1]	2	40·00	0·035	180
	1953	2	40·00	0·035	720
	1954	2	40·00	0·035	720
Northwest Territories	1952[1]	1	40·00	0·012	90
	1953	11	40·00	0·129	1,740
	1954	13	39·23	0·157	4,537
Canada	**1952[1]**	**8,079**	**39·26**	**0·098**	**721,449**
	1953	**8,332**	**39·17**	**0·099**	**2,985,217**
	1954	**8,214**	**38·88**	**0·096**	**2,914,101**

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[1] Program in effect for the last three months only of the fiscal year. [2] Estimated population as at June 1 of each year for the Provinces and 1951 Census data for the Territories.

A description of the pensions payable to blind persons under the Old Age Pensions Act 1927, repealed in 1951, will be found in the 1951 Year Book, pp. 234-235. The final statistics of operations under that program are given in the 1952-53 Year Book, p. 267.

Subsection 3.—Allowances for Disabled Persons

In June 1954, Parliament passed the Disabled Persons' Act under which the Federal Government will provide financial aid to the provinces for allowances, not exceeding $40 a month, to totally and permanently disabled persons aged 18 or over, subject to a residence qualification of at least 10 years. It is anticipated that the Act will become effective in January 1955. Within the limits of the Federal Act each province is free to fix the maximum amount of assistance payable, the maximum income allowed and other conditions of eligibility. The Federal Government's contribution per recipient cannot exceed 50 p.c. of $40 per month or of the assistance paid, whichever is less.

The allowance is not available to a person in receipt of an allowance under the Blind Persons Act, assistance under the Old Age Assistance Act, an allowance under the War Veterans Allowances Act, a pension under the Old Age Security Act, or to any person who is receiving money or assistance by way of mothers' allowances.

Further conditions of eligibility require that an applicant may not be a patient in a tuberculosis sanatorium, a mental institution, a home for the aged, an infirmary or an institution for the care of incurables. Except as prescribed in the regulations, the applicant may not be a patient or resident in a hospital, a nursing home or in a private, charitable or public institution. For an unmarried person, total income including the allowance may not exceed $720 a year and for a married couple, $1,200 a year; where the spouse is blind within the meaning of the Blind Persons Act, the total income of the couple may not exceed $1,320 a year.

Except for certain temporary absences, an applicant must have resided in Canada for at least 10 years immediately preceding the commencement of the allowance; an applicant who does not have 10 years' residence must have been in Canada prior to the 10 years for a total period equal to twice his absences during the 10 years. The provincial authority must suspend the payment of the allowance when, in its opinion, the recipient unreasonably neglects or refuses to comply with or to avail himself of training, rehabilitation or treatment measures or facilities provided by or available in the province.

Implementation of the program in any province is contingent upon the province passing enabling legislation and signing an agreement with the Federal Government. Nine of the ten provinces had indicated by June 1954 their intention of participating in the program.

Subsection 4.—National Physical Fitness Program

A fitness and recreational program was introduced by the National Physical Fitness Act in October 1943. The Act, which established a National Council to promote the well-being of the people of Canada through fitness and recreational activities, was administered by the Department of National Health and Welfare. Under this Act, the Federal Government made available to the provinces an amount not exceeding $232,000 annually on a per capita basis for the promotion of fitness and recreation programs. Financial assistance was given only to those provinces that signed specific agreements with the Federal Government and to the extent to which they matched it dollar for dollar up to the maximum available. During 1953-54, seven provinces—Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia—and the Northwest Territories participated in the program. The amounts made available to the individual provinces are given in the 1954 Canada Year Book, p. 253. National Fitness Scholarships were awarded annually to provide financial assistance to professionally qualified Canadians with three years' successful experience who desired to improve their professional qualifications.

The Physical Fitness Act was repealed in June 1954 but commitments in respect to agreements already made with the provinces were provided for under the repealing Act. The Physical Fitness Division, through which the Act was administered, continues to function within the Department of National Health and Welfare.

The Division provides consultative services on all aspects of fitness and recreation at the request of federal and provincial departments and national organizations. It acts as a clearing house for the latest information on fitness, recreation, community centres, physical education, athletics, sports and games, theatre arts and related activities. It operates a preview library service for visual aids. In addition, it maintains liaison with national associations and comparable organizations in other countries. To an increasing extent during the past few years, the Division has given direct assistance to provincial authorities by the provision of professional consultant services regarding organization and specialized instruction for leadership training courses at the regional and provincial level. These services augment those provided by provincial fitness and recreation offices, particularly in those specialized fields where the province is unable to provide services of its own.

Subsection 5.—Training Programs

Under the Vocational Training Co-ordination Act of 1942 (R.S.C. 1952, c. 286), the Federal Department of Labour, in co-operation with the provincial governments, carries on various training projects. Details of these schemes will be found in Chapter XVIII, Section 6.

Section 3.—Provincial Programs

Subsection 1.—Mothers' Allowances

All provinces have statutory provision for allowances to enable certain needy mothers to remain at home to care for their dependent children. The total cost of this assistance is paid from provincial funds, except in Alberta where a portion of each allowance is charged to the municipality of residence.

Subject to the conditions of eligibility, which vary from province to province, the allowances are payable to applicants who are widowed or whose husbands are mentally incapacitated and, except in Alberta, to those whose husbands are physically disabled and unable to support their families. They are also payable, except in Nova Scotia, to deserted wives who meet specified conditions; in several provinces to mothers who have been granted a divorce or legal separation and in some to unmarried mothers. Adoptive mothers and foster mothers are also eligible under certain circumstances. The age limit for children is 16 years except in Manitoba where it is 15 years and in Newfoundland where it is 17 years. Provision is made in most provinces to extend payment for a specified period if the child is attending school and six provinces continue to pay allowances on behalf of physically and mentally handicapped children for from two to five years.

In all provinces applicants must satisfy conditions of need and residence but both the amount of outside income and resources allowed and the length of residence required prior to application vary considerably, the latter, for example, from one year in Saskatchewan, Ontario and Newfoundland to five years in Quebec. All provinces require that the applicant be resident at the time of application and that the child or children live with the recipient, and most provinces require that they continue to live in the province while in receipt of an allowance. Nationality is a condition of eligibility in six provinces. The applicant must be a British subject, the wife or widow of a British subject or her child must be a British subject, except in Quebec and New Brunswick, where Canadian citizenship is required.

In each province the relevant Act is administered by public welfare authorities. Most provinces have a mothers' allowances board or commission which makes the final decision regarding eligibility and the amount of allowance granted or acts in an advisory capacity. In some provinces local advisory committees are also appointed. Rates of benefit as of June 1954 are given in the following paragraph.

In *Newfoundland*, the maximum allowance for a mother and one child is $25 a month, with $5 for each additional child and for a disabled father at home; the maximum for a family is $65 a month, with supplementary assistance of up to $20 monthly if necessary for proper care and maintenance. In *Prince Edward Island* a mother with one child may receive up to $25 a month, with up to $5 for each additional child; the family maximum is $50 monthly. In *Nova Scotia* a monthly maximum of $80 for a family is fixed by statute; the amount payable to a mother and one child is determined by family need. An amendment to the Act, to become effective January 1955, provides that an allowance not exceeding $40 per month may be paid on behalf of a disabled child 16 years or older who is not yet eligible for an allowance under the federal-provincial Disabled Persons Act. In *New Brunswick* the family maximum is $80 a month, with $35 for a mother and one child and $7.50 for each additional child. An additional $10 may be granted for rent if it is needed and if the allowance is below the family maximum. The maximum allowance in *Quebec* for a mother and one child is $35 in a district where the population is under 5,000 and $40 where it is 5,000 or over. An additional $1 per month is paid for each of the second, third, fourth and fifth children, $2 for the sixth and seventh, and $3 for the eighth and subsequent children. An extra $5 is allowed when the mother is unable to work or when a disabled father is living at home. *Ontario* pays a maximum of $50 a month for a mother and one child, with $10 for each additional child and for a disabled father at home. A foster mother with one child may receive up to $24 per month, with two children up to $48, and $10 for each additional child. The allowance may be increased up to $20 a month where need is shown and a winter fuel allowance, not exceeding $24 monthly, is also granted. The maximum monthly allowance in *Manitoba* for a mother and one child is $51. There is an additional $10 paid for a child aged one to six years, $13 for a child seven to 11 years, and $15.50 for a child 12 to 14 years; $17.25 is paid for a disabled father in the home. The family maximum is $167 plus winter fuel for seven months, with supplementary assistance of up to $25 monthly in special circumstances. In *Saskatchewan* the maximum allowance for a family is $85 a month, with $35 being paid for a mother and one child, $10 for a second child, $5 for each subsequent child and $10 for a disabled father at home. A foster parent with one child may receive up to $25 a month, with an additional $10 for a second child and $5 for each additional child. Supplementary assistance under the social aid program may be granted by the local municipality and the costs are shared equally by the province and the municipality. The allowance in *Alberta* may not exceed $50 per month for a mother with one child or $60 if her other income does not exceed $120 a year, $20 for the second child, $15 for the third and $10 for each subsequent child. A maximum of $145 is set for a family with nine or more children. Supplementary aid in the form of public assistance may be granted, where necessary, by the municipality of residence, with the Province reimbursing 60 p.c. of the cost. In *British Columbia* the maximum monthly mothers' allowance set by statute is $42.50 for a mother with one dependent child, and $7.50 for each additional child and for a disabled father living at home. Supplementation from social allowance funds brings the actual maximum monthly payments to $69.50 per month for a mother and one child and $14 for each additional child and for a disabled father living at home. Extra expenditure may be met through social allowance funds, and a nutrition allowance is available for tubercular patients and their families.

9.—Mothers' Allowances, by Province, as at Mar. 31, 1952-54[1]

Province and Year[1]	Families Assisted	Children Assisted	Benefits Paid[1]	Province and Year[1]	Families Assisted	Children Assisted	Benefits Paid[1]
	No.	No.	$		No.	No.	$
Newfoundland—				**Ontario—**			
1952	3,267	7,996	1,261,541	1952	7,748	16,843	6,037,618
1953	3,017	7,875	1,217,401	1953	7,621	16,798	6,431,229
1954	3,031	8,204	1,227,696	1954	7,059	16,782	6,219,337
P. E. Island—				**Manitoba—**			
1952	225	627	59,668	1952	932	2,482	783,184
1953	256	665	64,738	1953	1,005	2,591	866,156
1954	261	665	66,413	1954	1,099	2,848	1,006,507
Nova Scotia—				**Saskatchewan—**			
1952	1,996	5,988	—	1952	2,573	6,033	1,111,310
1953	2,405	6,667	1,405,765[2]	1953	2,424	5,815	1,328,884
1954	2,313	5,975	1,444,934	1954	2,272	5,925	1,217,309
New Brunswick—				**Alberta—**			
1952	1,848	5,292	—	1952	1,488	3,229	895,643
1953	2,066	5,947	1,225,263[3]	1953	1,524	3,360	1,048,772
1954	2,096	6,059	1,273,836	1954	1,609	3,632	1,112,803
Quebec—				**British Columbia—**			
1952	13,750	38,500	5,502,571	1952	503	1,064	286,440[4]
1953	15,442	43,238	7,482,521	1953	470	1,009	260,876[4]
1954	16,242	45,478	7,621,430	1954[5]	426	953	247,000[4]

[1] Year ended Mar. 31, unless otherwise indicated. [2] Because of change in fiscal year, amount shown is for 16-month period, Dec. 1, 1951, to Mar. 31, 1953. [3] Because of change in fiscal year, amount shown is for 17-month period, Nov. 1, 1951, to Mar 31, 1953. [4] Not including $128,980, $150,577 and $141,000 paid as supplementation from social allowance funds in 1952, 1953 and 1954, respectively. [5] Estimated.

Subsection 2.—Provincial Welfare Services

The care and protection of neglected and dependent children, care of the aged, social assistance or relief, and other special services outlined in the following summary are governed by provincial legislation, although in many areas responsibility for services rests with municipal or voluntary organizations. Though the programs and the methods of financing vary considerably, most provinces share the costs of some or all of the municipal services in organized areas and assume the total cost in unorganized territories. The medical services available to social assistance recipients are described at pp. 229-242. Mothers' allowances are dealt with in the immediately preceding subsection, old age assistance at pp. 264-265, and allowances for the blind at pp. 266-267.

Newfoundland.—Provincial welfare services are administered by the Department of Public Welfare through a number of regional welfare centres.

Child Care and Protection.—Child welfare has developed largely as a public service and is administered by the Child Welfare Division. Neglected children, made wards of the Director, are placed in foster or adoptive homes or in institutions. The Department pays for the maintenance of wards, grants subsidies for children admitted to orphanages administered by religious organizations, and contributes towards the cost of educating blind and deaf-mute children in institutions at Halifax, N.S., and Montreal, Que. The Division operates an Infants' Home providing short-term care.

In 1953, a Division of Corrections was established to deal with both juvenile delinquents and adult offenders and, for the present, to administer correctional institutions for boys and girls. The Corrections Act, 1953, provides for the establishment of a Youth Guidance Authority, an Adult Guidance Authority and classification centres.

Care of the Aged.—The Province maintains a Home for the Aged and Infirm at St. John's and also pays a per diem rate for needy old people in the Salvation Army Home and in approved boarding homes.

Social Assistance.—Under the Dependents' Allowances Act, the Province grants assistance to needy unemployables not eligible for other forms of statutory assistance. Aid for certain needy able-bodied persons is provided under the Health and Public Welfare Act.

Prince Edward Island.—The Department of Health and Welfare is responsible for the administration of provincial welfare services.

Child Care and Protection.—Under the Children's Protection Act, neglected or delinquent children may be placed under the guardianship of the Director of Child Welfare or an approved child welfare agency. The children are placed in foster or adoptive homes, boarding homes or children's institutions under the inspection of the Director. Provincial grants are made to child welfare agencies and to the two private orphanages, one Protestant and one Roman Catholic. Juvenile Courts are under the Attorney General's Department, and juvenile delinquents are cared for at the expense of the Department of Health and Welfare in correctional institutions of the neighbouring provinces.

Care of the Aged.—The aged and infirm are cared for in Falconwood Mental Hospital and in two provincial infirmaries.

Social Assistance.—The Department provides direct social assistance in rural areas and, by agreement, assumes 50 p.c. of the cost of assistance granted by the City of Charlottetown and the incorporated towns and villages. The Department also operates a province-wide program of financial aid to families where the breadwinner is suffering from tuberculosis and is unable to support the family.

Nova Scotia.—Provincial welfare services are administered by the Department of Public Welfare through a number of regional offices.

Child Care and Protection.—The Child and Family Welfare Branch administers the child-protection legislation including the inspection of institutions and the licensing of foster and maternity homes. Neglected children may be made wards of the Director of Child Welfare or of approved Children's Aid Societies. Each Society receives annually a provincial grant of up to $2,000; a sum equal to 50 p.c. of funds received through private campaigns or from municipalities for general operating expenses; and an additional grant of not less than $1,000, the maximum determined on a per capita basis. The Province and municipality of residence contribute towards the maintenance of each ward placed in a foster home or institution, unless a court order for support is made against the parents.

The Branch operates the Nova Scotia Training School for mentally defective children and the Nova Scotia School for Boys for juvenile delinquents. It is also responsible for the operation of the six Juvenile Courts and the supervision of their probation staffs. The municipality of residence is responsible for the maintenance of children in reformatories although the Province may contribute also if the reformatory complies with specified standards.

Care of the Aged.—The aged are cared for in municipal or county homes, in homes operated by religious or private organizations and in private boarding homes where the municipality of residence may contribute to the cost of maintenance. Homes for the aged are subject to provincial inspection but they do not receive direct assistance from the Province.

Social Assistance.—Relief to unemployables is a local responsibility.

New Brunswick.—The Department of Health and Social Services administers provincial welfare legislation.

Child Care and Protection.—Under the Children's Protection Act, administered by the Minister of Health and Social Services, responsibility for protection and placement services is largely delegated to Children's Aid Societies throughout the Province. Guardianship of a neglected child may be vested in a Society, the Director of Child Welfare or in the Court. Orphanages are operated by religious, private or, in some cases, municipal organizations. With a few exceptions, boarding homes must be licensed and are subject to the provincial inspection required for all child-caring institutions. The Province and the municipality of residence each contributes towards the maintenance of wards committed to an institution, and the Province also reimburses municipalities for one-half of the cost of maintaining wards placed in foster homes, up to a prescribed maximum. The Department may place blind or deaf-mute children in special schools at Halifax, N.S., and Montreal, Que. Juvenile Courts are under the Attorney-General's Department and delinquent boys may be placed in the Provincial Industrial School for Boys which reports to the Minister of Health and Social Services.

Care of the Aged.—Homes for the aged are operated under municipal, religious, fraternal or private auspices and are subject to provincial inspection but they receive no direct financial support from the Province.

Social Assistance.—Relief to unemployables is a local responsibility.

Quebec.—Major responsibility for the administration of provincial welfare measures is shared by the Department of Health and the Department of Social Welfare and Youth. The former administers the Quebec Public Charities Act which embodies the Government's policy of granting subsidies to religious and private institutions where they exist rather than creating public services. Grants are made to these institutions on a per diem basis, with the Province, the municipality of residence and the institution sharing the cost of maintenance of indigent persons admitted for care. The Department of Social Welfare and Youth is responsible for preventive and rehabilitative work among neglected and dependent children and for grants to recreation and welfare agencies, in addition to certain important educational functions. Social Welfare Courts are, however, under the jurisdiction of the Department of the Attorney-General.

Child Care and Protection.—Needy or abandoned children are generally cared for in institutions such as orphanages, nurseries and other homes, assisted under the Quebec Public Charities Act, although there is an increasing use of foster homes by child welfare agencies. However, children who are found by a Social Welfare Court or other court to be particularly exposed to moral or physical dangers may be admitted to recognized youth protection schools under the Youth Protection Schools Act, 1950, administered by the Department of Social Welfare and Youth. Municipalities of residence are required by law to contribute 50 p.c. of the operating and maintenance costs of these schools but, in practice, the Province pays approximately 87 p.c. of all expenses and the entire cost of new construction. The Social Welfare Courts, which in 1950 replaced Juvenile Courts, have statutory responsibility in connection with child and youth protection and certain other provincial programs and also serve as Family Courts.

Children who have been exposed to tuberculosis but who have not been infected are placed with rural families under the supervision of the Department of Health in co-operation with child-welfare agencies.

Care of the Aged.—Institutional care for indigent old people is provided under the Quebec Public Charities Act through private institutions. Under the same Act, family welfare agencies administer home allowances to needy old people who do not require institutional care.

Social Assistance.—Financial aid is not provided to needy families in Quebec but institutional care for indigents is available under the Quebec Public Charities Act. The Department of Colonization operates a program whereby families in need are settled on the land in newly opened districts and granted financial aid until they become self-supporting. In these areas, a disability pension scheme is linked to a program of free medical services.

Ontario.—Provincial welfare services are administered by the Department of Public Welfare. The Province is divided into 17 welfare districts with a supervisor in charge of each district.

Child Care and Protection.—Three major child welfare Acts were amended and consolidated in a single new Child Welfare Act in 1954. The Act is administered by the Child Welfare Branch which supervises the local Children's Aid Societies to which responsibility for the care and protection of neglected and dependent children is delegated. Annual provincial grants to these Societies include token grants based upon the quality and level of services provided in addition to grants equal to 25 p.c. of the amounts raised through voluntary effort. In addition the Province reimburses the municipalities of residence in amounts not exceeding 25 p.c. of the net cost of maintaining children made wards of Children's Aid Societies. The Province also reimburses a municipality to the same extent where it has made payments under an agreement with a Children's Aid Society for the temporary care and shelter of non-wards. Children's institutions are governed by provisions of the Charitable Institutions Act and day nurseries by the Day Nurseries Act. The Province makes per diem grants for children in charitable institutions and pays one-half of the operating and maintenance costs of municipal day nurseries. Juvenile Courts are under the Attorney-General's Department, while training schools for juvenile offenders are operated by the Department of Reform Institutions.

Care of the Aged.—Municipalities are required by law to provide institutional care for the aged, with the Province contributing 50 p.c. of the net operating and maintenance costs and 50 p.c. of the costs of approved new construction or approved additions and extensions. Both public and private institutions are subject to provincial regulations and inspection and, under certain circumstances, charitable institutions may receive a small per diem grant for each person maintained. Grants are made available to limited-dividend housing corporations to assist in the construction and equipment of low-rental housing projects for elderly persons.

Social Assistance.—Under the Unemployment Relief Act, the Province reimburses municipalities, up to a prescribed maximum, for 50 p.c. of their expenditures on relief to needy unemployables and on incapacitation allowances and rehabilitative measures for single, needy, handicapped residents. In unorganized areas the program is administered and financed by the Department. The Soldiers' Aid Commission extends emergency assistance and advice to former service men and their families. Under the Disabled Persons' Allowances Act, assistance of up to $40 per month is granted to permanently and totally disabled persons.

Manitoba.—The Public Welfare Division of the Department of Health and Public Welfare is responsible generally for provincial welfare services.

Child Care and Protection.—The Director of Public Welfare administers the child welfare legislation. Included in this administration is the supervision of Children's Aid Societies and of child-caring institutions. The Provincial Public Welfare Division carries on these services directly through a decentralized program of district offices in a large area of the Province. In the remainder of the Province, the Director supervises the four non-denominational Children's Aid Societies in their respective territories. Neglected children may be made wards of the Director of Public Welfare or of a Children's Aid Society. Municipalities are responsible for the maintenance of wards but the Province reimburses them for a portion of these costs from the $500,000 annual fund distributed among the municipalities in proportion to their relief and child welfare expenditures. Under agreements between the Province and the Children's Aid Societies, payment of annual provincial grants is conditional on the provision of a basic level of service and the collection of equivalent voluntary contributions; payments are made in accordance with a formula based on the number and cost of social workers per 100,000 population in a representative area where the Division directly administers child welfare services.

The Division provides foster-home care and supervision for mental defectives placed in the custody of the Director of Public Welfare and, with the Division of Psychiatry, operates a home for mentally defective girls. The Attorney-General's Department is responsible for Juvenile Courts and operates a boys' home and a girls' home for delinquents.

Care of the Aged.—Institutions and nursing homes for the aged and infirm are supervised and licensed by the Department under public health legislation.

Social Assistance.—Municipalities are responsible for assistance to needy residents, but these expenses, as well as ward maintenance costs, are partly reimbursed by the Province from the $500,000 annual social assistance fund which is allocated on a *pro rata* basis. In addition, whenever the costs of social assistance and ward maintenance to any municipality exceed in a year a sum equivalent to four mills of the equalized assessment of such municipality, the Province reimburses 60 p.c. of the excess. The Province is responsible for aid to persons without municipal residence as well as for general assistance in unorganized territory.

Saskatchewan.—Provincial welfare services are administered by the Department of Social Welfare and Rehabilitation.

Child Care and Protection.—The Department provides welfare services for children throughout the Province, with the exception of Saskatoon where certain responsibilities are delegated to the Children's Aid Society. Children found to be neglected are, by court order, made wards of the Minister and are placed in foster homes, adoptive homes or institutions. A portion of the maintenance costs of wards, except of children born out of wedlock, is paid by the municipality of residence. The Branch operates two institutions for the temporary care of wards. It also operates a program of non-ward care and a program for unmarried mothers.

The Corrections Branch of the Department is responsible for both adult and juvenile correctional services, supervises probation and parole services for juvenile delinquents and administers the Saskatchewan Boys' School and the provincial gaols. The Juvenile Court is presided over by a judge who devotes his time exclusively to cases of juvenile delinquency. Juveniles are discharged from correctional institutions only by parole. A Youth Guidance Authority supervises the discharging of juveniles from probation, from institutions and from parole.

Care of the Aged.—The Department operates three homes for the aged, and licenses and supervises all privately operated homes. Maintenance, where necessary, may be arranged under the social-aid program. The Nursing Homes and Housing Branch is responsible for planning to meet future needs of the aged and for co-operating with other governmental organizations in the fields of institutional care and housing for the aged.

Social Assistance and Special Services.—The costs of assistance to needy persons are shared equally by the municipalities and the Department, but the Province pays the entire cost for transients and for persons in unorganized areas. The Rehabilitation Branch provides training and placement services for the handicapped; one-half the cost of this training is borne by the Province and one-half by the municipality of residence. It is also responsible for the rehabilitation of minority groups and operates a farm where the Métis—persons of mixed Indian and white stock who do not qualify under the Indian Act—are instructed in modern methods of farming while being paid for their work. Three schools are conducted for Métis children.

The Department administers the Provincial Housing Act which empowers the Province to enter into public housing projects under Sect. 35 of the National Housing Act, and to stimulate construction of low-rental housing projects by limited-dividend housing corporations.

Alberta.—The Department of Public Welfare is responsible for the administration of provincial welfare measures. It has branches at the four larger centres, and inspectors are located in suitable areas throughout the Province.

Child Care and Protection.—The care of children who are made wards of the Government under court orders or by agreement is under the control of the Child Welfare Commission. These children may be placed in foster homes or in licensed boarding homes or institutions. Permanent wards may also be placed in adoptive homes. The cost of maintenance of wards is paid by the Province which recovers 40 p.c. of such cost from the municipality of residence. The Home Investigating Committee is responsible for the inspection and the licensing, where required, of all homes and institutions in which children are given care. The Attorney-General's Department administers legislation regarding juvenile delinquency.

Care of the Aged.—The Province reimburses municipalities for 50 p.c. of cost incurred for the maintenance of needy, aged or infirm persons in municipally licensed homes. These homes must meet a specified standard before a licence is given and they are inspected periodically by officials of the Department of Public Welfare.

Social Assistance.—Municipalities are responsible for assistance to indigent residents but the Province is authorized to make grants to the municipalities of up to 60 p.c. of the value of the assistance. The Province pays the total cost of assistance granted to transients and to residents of unorganized districts, subject to a refund of 40 p.c. from the districts, through the Department of Municipal Affairs. Families may be assisted through settlement on suitable farm lands. The Single Men's Division maintains two hostels and one welfare centre to care for unemployable, single, homeless men without municipal domicile. Single ex-service men are cared for at Calgary and Edmonton without being placed in institutions. The Province has also established nine Métis colonies where settlers have extensive fishing, hunting and trapping rights, and are encouraged to engage in lumbering, agriculture and stock-raising. Educational services are provided and government-operated stores sell goods at cost price.

Widows and Disabled Persons Pensions.—Under the Widows Pension Act, widows aged 60 to 64 years, inclusive, may receive pensions of up to $40 per month. Wives of husbands committed to hospital under the Mental Diseases Act and wives who have been deserted without reasonable cause for a specified period are also eligible if within the age group. To be eligible, applicants must meet certain conditions of need and residence and must not be in receipt of a mothers' or blind persons' allowance.

The Disabled Persons Pension Act provides for the payment of pensions of up to $40 per month to persons suffering from a chronic disability and unable to accept gainful employment.

British Columbia.—The administration of provincial welfare services by the Social Welfare Branch of the Department of Health and Welfare is decentralized through district and municipal offices in six regions covering the whole Province. Generalized field service is provided by provincial social workers. The staff of the Social Welfare Branch is also responsible for welfare services required in connection with a number of programs operated by the Health Branch.

Cities and municipalities of over 10,000 population must have their own social welfare departments to administer the social assistance program and to provide case-work services. The Province pays 50 p.c. of the salaries of municipal social workers or, where more than one is needed, matches the municipal appointees worker for worker. Smaller municipalities may have their own or amalgamated social welfare departments or they may pay for the services of the Social Welfare Branch.

Child Care and Protection.—The Child Welfare Division administers legislation governing the protection of children, including adoptions, and provides direct services except at Vancouver and Victoria where it supervises the Children's Aid Societies. Municipalities are responsible for the costs of maintaining wards, but the Province reimburses them to the extent of 80 p.c. of such expenditure and pays the entire cost for children in unorganized areas. The Province pays the total maintenance cost of wards who are children of unmarried mothers. Child-caring institutions, boarding homes and day nurseries are licensed and supervised. The Social Welfare Branch administers an industrial school for delinquent boys and one for delinquent girls. Family case-work and rehabilitative supervision of children released from the schools are carried on in co-operation with the Psychiatric Division and the probation service of the Juvenile Courts, which are under the jurisdiction of the Attorney-General's Department.

Care of the Aged.—The Social Welfare Branch operates the Provincial Home which provides care for aged men. In addition, the Province operates Provincial Homes for the Aged under the mental health program administered by the Provincial Secretary's Department, as well as the Provincial Infirmary for chronic care under the B.C. Hospital Insurance Service. The Province also contributes 33 p.c. of the capital cost of construction of municipal nursing homes, and licenses and supervises municipal and private nursing homes and boarding homes. The maintenance of needy residents, where necessary, is shared with the municipalities on an 80-20 basis. The Province assumes the total cost for provincial charges.

Social Assistance.—The social assistance program is administered by the Director of Welfare and supervised by the Family Division. It includes allowances to indigent individuals or families, counselling services, occupational training and the maintenance costs of nursing-home or boarding-home care. The Province reimburses the municipalities 80 p.c. of the cost of basic and certain supplementary social assistance payments to indigent municipal residents and assumes the total cost of assistance granted for those without municipal residence.

Subsection 3.—Workmen's Compensation

In all ten provinces, legislation is in force providing for compensation for injury to a workman by accident arising out of and in the course of employment or by a specified industrial disease. A summary of provincial workmen's compensation legislation is given in Chapter XVIII.

Subsection 4.—Care of Dependent and Handicapped Persons

Statistics of charitable and benevolent institutions are compiled every five years. The Census of 1951 covered the 1950 activities of 533 institutions, 490 being residential institutions and 43 being day nurseries. Summary statistics are given in the 1954 Year Book, pp. 263-264.

PART III.—NATIONAL VOLUNTARY HEALTH AND WELFARE ACTIVITIES

A number of national voluntary agencies carry on important work in the provision of health and welfare services, planning and education. These agencies, some of which are described below, supplement the services of the federal and provincial authorities in many fields and play a leading role in stimulating public awareness of health and welfare needs and in promoting action to meet them.

Canadian Welfare Council.—The Council, established in 1920, is a national association of organizations and individual citizens in partnership to secure comprehensive, well-administered social services of high quality for the Canadian people. It furnishes authoritative information, technical advice and field service in the main areas of social welfare and provides a means of co-operative planning and action by serving as a link between the public and private agencies. Member organizations include community chests and councils, private social agencies, various federal, provincial and municipal departments and other groups and individuals active in the fields of health, welfare and education.

The policies and programs of the Council are determined by its members with the help of a nationally representative elected board of governors. Aided by professional staff, the members work together through Divisions of Child and Family Welfare, Recreation, Public Welfare, Delinquency and Crime, and Community Chests and Councils. Other aspects of social welfare are dealt with by special committees and departments, including the Department of French-speaking Services.

Some subjects to which the Council is giving study are: labour, Canadian adoption laws as a step towards improved adoption procedure in all provinces, needs of the aged, public assistance, residence and settlement legislation, rehabilitation of the disabled, health insurance and civil defence. A large number of surveys on a variety of subjects have been requested by agencies, communities and provinces. Council publications include the periodicals *Canadian Welfare* and *Bien-être social canadien,* an annual directory of Canadian welfare services, and division bulletins, pamphlets and reports.

Canadian Conference of National Voluntary Health and Welfare Organizations.—The Conference, set up in 1949, provides national health and welfare agencies with a clearing-house and a medium for exchange of experience and for joint study and action with a view to increasing co-operation in matters of common concern.

Canadian National Institute for the Blind.—The Institute, founded in 1918, provides extensive rehabilitative services for blind persons and carries on an active program for the prevention of blindness. Its services include home teaching of touch reading and writing, handicrafts, occupational training and placement, welfare services and financial assistance. It operates factories to afford employment for blind men and women and controls tobacco stands, news stands and industrial cafeterias managed by the sightless. Field services are provided through over 30 district offices staffed by field workers and teachers, most of whom are blind. The Institute maintains a national library of Braille and recorded literature, operates several residences and gives financial support to recreational clubs for blind persons. In the preventive field, it operates eye clinics, arranges treatments and distributes literature. The Institute is supported by government grants and voluntary subscriptions.

The Canadian Red Cross Society.—The peacetime program of the Society consists of eight major services. The operation of outpost hospitals and of a blood-transfusion service are important projects in nearly all provincial divisions. Nutrition and visiting homemaker's services, and instruction in swimming and water safety are carried on in most branch areas. In addition, relief is supplied in times of national and international disaster, craft training and recreational centres are operated for hospitalized war veterans, and a national inquiry bureau traces persons for the purpose of reuniting families and friends.

The Canadian Junior Red Cross promotes health and good citizenship in schoolroom branches across Canada. As part of its program, the Junior Red Cross Crippled Children's Fund is maintained to assist in providing treatment for handicapped children.

The Victorian Order of Nurses for Canada.—The Victorian Order of Nurses is a voluntary public health agency, national in scope and having as its primary object the care of the sick in their own homes. Care is given, under medical direction, by visiting nurses to medical, surgical and maternity patients, a large percentage of whom would otherwise be without skilled nursing services. Patients are expected to pay the cost of the home visits, but fees are scaled according to family income and service is never refused because of inability to pay.

Part-time nursing service is given in industrial plants where the number of employees does not warrant full-time employment of a nurse. In smaller centres where the Order provides the only public health nurse, the program is usually enlarged to include school nursing, assistance at immunization clinics and child health centres, and other public health services.

The Health League of Canada.—The Health League of Canada is a voluntary association devoted to health education. Through the media of press, radio, posters, pamphlets, motion pictures and the public platform, the League keeps the public informed concerning the health value of milk pasteurization, immunization procedures for preventable diseases, proper nutritional habits, sanitary work practices by public food-handlers and organized health programs for industrial workers. The League supplements its year-round program with the annual sponsoring of a National Health and a National Immunization Week.

The Order of St. John.—The primary purpose of the Order is to teach first aid and home nursing to citizens of Canada irrespective of age, race and creed, and to provide trained and organized personnel to help in time of emergency. The Canadian branch was organized in 1895 and, since that time, more than 1,250,000 persons have been trained and have passed examinations in various subjects. The Order has its headquarters and national offices at Ottawa, branches in every province and local centres in hundreds of cities, towns and villages throughout Canada. There are two subsidiary branches, the St. John Ambulance Association and the St. John Ambulance Brigade, the first devoted to teaching and the second to rendering voluntary public assistance as required. The Order has been selected as the official organization to train civil defence workers in basic and advanced first aid.

The Canadian Arthritis and Rheumatism Society.—The Canadian Arthritis and Rheumatism Society was incorporated in 1948 for the purpose of reducing morbidity and mortality from arthritic and rheumatic diseases. Its objectives include the raising of funds to support research, the education of professional personnel and of the general public, and the promotion and organization of treatment facilities. A Medical Advisory Board composed of leading physicians, surgeons and scientists advises on the research program, professional education and public relations.

Divisions of the Society are organized in nearly every province. Arthritis clinics sponsored by the Society have been established in 30 hospital out-patient departments and, in addition, 44 mobile physiotherapy units provide treatment and consultations to those unable to leave home.

The Canadian Mental Health Association.—The Canadian Mental Health Association operated between the years 1918 and 1950 as the National Committee for Mental Hygiene. The Association carries on a continuous educational campaign for the general public on various aspects of mental health and, in co-operation with the University of Toronto, conducts a mental health liaison course for selected teachers from all provinces. Provincial branches seek to promote a better understanding of the problems of mental illness and the need for community participation in mental health services. The program of the Association also includes fact-finding surveys of current mental health services and research studies of specific aspects of mental illness and social behaviour.

Other National Health Organizations.—Additional voluntary agencies are engaged in a variety of health activities including financial support and operation of educational programs, research and training, and the provision of treatment. These activities may be directed towards the general public or towards specific categories of ill or disabled persons, such as the paraplegics. Some organizations, such as those dealing with the blind and the deaf, are interested in the welfare as well as the health problems of the groups served. Organizations of professional medical and related personnel, in particular of public health personnel, assist in the development of agencies and in guiding their activities.

PART IV.—VETERANS HEALTH AND WELFARE SERVICES*

Section 1.—The Department of Veterans Affairs

The great majority of veterans have now been assimilated into civilian life and the work of the Department of Veterans Affairs has settled into a well-defined pattern, its major functions being concerned with medical treatments and allowances, payment of pensions, welfare work, rehabilitation of the disabled and land settlement. The Department maintains 18 district offices and two sub-district offices in Canada as well as a district office at London, England. The administration of the Veterans' Land Act is conducted through eight district offices and 35 regional offices. Travelling settlement officers operate from the regional offices and serve the veterans settled throughout Canada.

The basis of administration of the Department of Veterans Affairs, established in 1944, is dealt with in the 1946 Year Book, pp. 1053-54. The work of the Department as it developed year by year is outlined in subsequent editions and is brought up to Mar. 31, 1954, in the following Sections.

Section 2.—Medical, Dental and Prosthetic Services

Medical Services.—It is the policy of the Department to give veterans the most modern medical treatment possible. Where a Departmental hospital is situated in proximity to a medical school, close co-operation is maintained between the two. Veterans hospitals are actively engaged in undergraduate and post-graduate teaching, and members of the medical faculties are employed in the hospitals with other specialists. Eleven hospitals have received approval by the Royal College of Physicians and Surgeons of Canada for advanced post-graduate teaching in internal medicine and general surgery. Seven of these are also approved for advanced post-graduate teaching in specialties. The majority of the consultant staffs at Departmental hospitals are employed on a part-time basis and are also engaged in medical teaching.

Professional and other members of the university staffs are employed as consultants and advisers in the same way as medical consultants. Thus, the Department receives expert advice in nursing, pathology, medical social services and other medical sciences.

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* Contributed by the various Branches of the Department of Veterans Affairs.

Special centres for the investigation and treatment of arthritis, paraplegia, tuberculosis, etc., are active in the larger hospitals. Where Departmental facilities are not available, veterans with service-related disabilities receive treatment and hospitalization through the doctor of their choice.

During the year ended Mar. 31, 1954, 114 research projects were in progress, of which 70 were continuing and 44 were initiated during the year. Chief among these projects may be mentioned clinical research on atherosclerosis. The ultracentrifuge, located in Montreal, acts as the hub for several projects and receives specimens for analysis from all over Canada. A program of research into the problems of the ageing veteran has also been started and advice is being received from a special panel of experts. It is hoped to discover a practical means of assessing physiological age and to obtain valuable information regarding reasons for premature ageing. Research on the effects of ACTH and Cortisone on various conditions is continuing as are various follow-up studies of a clinical nature.

At Mar. 31, 1954, the Department was operating 9,974 beds in 19 separate institutions. Twelve were active treatment hospitals with 9,082 beds; two Health and Occupational Centres for convalescents with 365 beds; four Veterans' Homes with 327 beds, and one Tuberculosis Sanatorium with 200 beds.

On July 1, 1954, an amended Sect. 13 of the Veterans Treatment Regulations came into force, extending eligibility for treatment in DVA hospitals for non-pensioned conditions to a much larger group of veterans. Overseas veterans and those in receipt of disability pensions are now eligible for treatment for almost any non-pensioned condition, subject to facilities being available, if their annual incomes, less deductions for dependants, do not exceed $2,500. Annual income means income for the six months prior to admission to hospital plus the estimated income for the succeeding six months. Formerly only those veterans whose adjusted incomes did not exceed $1,200 were eligible.

Treatment is free for those veterans whose adjusted incomes do not exceed $720, but those with higher incomes are required to pay a part of the cost of hospitalization, the amount charged varying with their incomes but not exceeding a fixed and limited amount in any 12-month period. In addition to charges made in respect of income, these veterans may be required to pay for hospitalization from resources—cash, bonds or negotiable securities—or a combination of both. These liquid assets, however, may not be reduced below $500 for a single man or $1,000 for a married veteran for periods of hospitalization of 30 days or less. The figures increase progressively for longer periods until they reach $1,000 and $2,000, respectively, for 80 or more days of treatment.

All veterans have been eligible since 1950, under Sect. 23 of the Regulations, for treatment in DVA hospitals for non-pensioned conditions by guaranteeing the full cost of their hospitalization. During the year ended Mar. 31, 1954, approximately 2,500 veterans took advantage of this privilege.

Dental Services.—The number of dental treatments given during the years ended Mar. 31, 1941-54, were:—

Year ended Mar. 31—	*Treatments*
	No.
1941	99,590
1942	73,113
1943	102,554
1944	66,562
1945	249,170
1946	509,703
1947	2,700,052
1948	1,191,218
1949	218,173
1950	158,149
1951	128,206
1952	103,242
1953	103,255
1954	126,531

Prosthetic Services.—The Prosthetic Services Branch of the Department of Veterans Affairs supplies, by manufacture or procurement, all orthopædic and surgical appliances prescribed by the Treatment Services Branch. The maintenance and renewal of such prostheses for all eligible cases is also the concern of the Branch. A large modern centre at Sunnybrook Hospital, Toronto, together with 11 district centres and five visiting centres in the principal cities, extends the manufacturing, maintenance and fitting service across the country. This system ensures a standardization of parts of major prostheses, a control of quality of supplies and availability of service at all times.

A Research and Development Section at Toronto is constantly at work on improvements and, in co-operation with the manufacturing services, conducts the field-testing of new developments. Close contact is maintained with the National Research Council and with research committees in the United States and the United Kingdom.

During the year ended Mar. 31, 1954, 61,843 persons were supplied with appliances or accessories compared with 61,488 during the previous fiscal year. Total issues during these two years numbered 119,963 and 117,375, respectively.

Vetcraft Shops.—The Department operates Vetcraft Shops at Toronto and Montreal giving sheltered employment to disabled veterans. These shops manufacture poppy emblems and wreaths for sale by the Canadian Legion on Remembrance Day. An average of 47 veterans and 24 homeworkers are employed. Production value was approximately $230,500 for the 1953 campaign.

Section 3.—Pensions and Allowances

The Canadian Pension Commission.—The Commission administers the Pension Act and the Civilian War Pensions and Allowances Act and reports to Parliament through the Minister of Veterans Affairs. The Head Office of the Commission is at Ottawa and representatives, known as Pension Medical Examiners, are located at each District Office of the Department.

It is the responsibility of the Commission to adjudicate upon claims for injury or disease resulting in disability or death during service with the Navy, Army or Air Force of Canada, and to consider claims for the supplementation of awards to Canadians who suffered disability or death while serving in the Armed Forces of the United Kingdom or its allies in World War I or World War II.

The Pension Act.—Under the Pension Act (R.S.C. 1952, c. 207 and amendments):—

(1) Pensions payable to veterans of the Fenian Raid and Northwest Rebellion under authority of Orders in Council are supplemented to the Canadian scale.

(2) Pensions payable by Great Britain on account of Canadians who served in the South African War are supplemented to the Canadian scale.

(3) Pensions for peacetime service prior to World War I payable under Orders in Council are supplemented to the Canadian scale.

(4) Pensions are paid in respect of service in World Wars I and II for injury or disease or the aggravation thereof resulting in disability or death attributable to or incurred during service.

(5) Pensions for peacetime service between World Wars I and II and subsequent thereto are paid when the injury or disease or aggravation thereof resulting in disability or death arose out of or was directly connected with service.

(6) Special provision was made for the Canadian Army Special Force and for those who had served in a theatre of operations prior to November 1, 1953.

In previous issues of the Year Book information is given regarding the development of Canadian pension legislation and yearly statistics regarding numbers and liability. As at Mar. 31, 1954, pensions in force were as follows:—

Payable	*Pensions*	*Liability*
	No.	$
To dependants	33,538	33,691,738
For disability	159,133	91,507,288
TOTALS	192,671	125,199,026

The pension paid for a total disability to a former member of the Armed Forces of the rank of major and below, with a wife and two or more children, amounts to a personal pension of $125 monthly, an additional $45 for his wife, $20 for the first child, $15 for the second, and $12 for each additional child. If he is helpless and in need of attendance, he is granted a helplessness allowance, which might vary from a minimum of $480 to a maximum of $1,400 per annum depending on the amount of attendance required. In the case of the blind, where the attendance required is not constant, the helplessness award is $960 per annum.

A pensioned widow of a deceased member of the forces who held the rank of major or lower rank receives $100 per month, with $40 for the first child, $30 for the second and $24 for each additional child. If she remarries, she is granted one year's pension as a final payment and pension usually continues for her children. Pension for a boy expires when he reaches the age of 16, and for a girl at 17. However, it may be continued to the age of 21 if the child is making satisfactory progress in a course of education approved by the Commission.

During the 1953-54 Session of Parliament the Pension Act was amended to provide additional pension for legally adopted children, for the wives of World War I pensioners married after Apr. 30, 1951, and before May 1, 1954, and for housekeepers of divorced pensioners with minor children. Widows of deceased pensioners who were not eligible only because their marriage to the pensioner was contracted after Apr. 30, 1951, may now be considered for pension if the marriage was contracted prior to May 1, 1954. Awards of helplessness allowance, which heretofore could not be paid during the period the pensioner was cared for under the jurisdiction of DVA, may now be paid if the pensioner is receiving out-patient treatment and is otherwise qualified. None of these benefits was made retroactive.

Civilian War Pensions and Allowances Act.—This Act extends pension legislation to a number of civilian groups whose work was closely associated with the World War II war effort, including merchant seamen, auxiliary services personnel, fire fighters who served in the United Kingdom, special constables with the Royal Canadian Mounted Police, overseas welfare workers, etc.

Veterans' Bureau.—The Veterans' Bureau, staffed by Pensions Advocates, most of whom are lawyers, was established in 1930 to assist those seeking war disability or dependant's pension in presenting their claims to the Canadian Pension Commission (*see* 1947 Year Book, p. 1142). This service is also given to persons applying for pension under the Civilian War Pensions and Allowances Act. There are District Pensions Advocates in all district offices of the Department and the service they provide is free of charge. Most applications for pension are handled in this way and, as at Mar. 31, 1954, the Bureau had approximately 6,200 active claims in hand.

During the 1953-54 fiscal year the Bureau was asked to assist in the preparation of ex-prisoner-of-war claims for compensation for maltreatment. As a result of this assignment, pensions advocates participated in the presentation of 3,100 claims before the War Claims Commission.

Section 4.—Rehabilitation of Veterans

The Veterans' Welfare Services Branch of the Department of Veterans Affairs is responsible for the administration of benefits available to discharged members of the Forces under the terms of the Veterans Rehabilitation Act, the War Service Grants Act, and the Veterans Benefit Act. The Branch renders assistance to veterans and advises them in social problems through the Social Service Section. It does not, however, duplicate any service that is already available to a veteran as a citizen.

War Service Grants Act.—The War Service Grants Act (R.S.C. 1952, c. 289) was amended by setting Dec. 31, 1954, as the last date for World War II veterans to apply for gratuities, except for veterans with overseas service who can demonstrate unusual reasons for delay in applying. The period during which application may be made for re-establishment credit was extended to Jan. 1, 1960, or 15 years after discharge, whichever is the later, and dependent children were included among those to whom the unused credit of a deceased veteran can be made available. Another amendment permits the use of re-establishment credit to obtain veterans insurance after the cut-off date for the purchase of veterans insurance has expired.

War Service Gratuities.—The amounts expended as gratuities under the War Service Grants Act up to Mar. 31, 1954, are shown in Table 1.

1.—Gratuity Payments under the War Service Grants Act, Years Ended Mar. 31, 1945-54

Year and Service	Navy	Army	Air Force	Miscellaneous	Total
	$	$	$	$	$
1945—					
Forces	973,958	14,663,621	3,468,852	—	19,106,431
1945-46—					
Forces	27,277,979	121,003,582	64,157,016	—	212,438,577
Canadian Fire Fighters	—	—	—	161,760	161,760
Auxiliary Services	180	58,646	36,116	—	94,942
1946-47—					
Forces	17,766,529	170,658,329	32,949,430	—	221,374,288
Auxiliary Services	365	254,616	98,475	—	353,456
1947-48—					
Forces	940,778	11,386,313	—	—	12,327,091
Auxiliary Services	—	315,046	Cr. 5,198	—	309,848
1948-49—					
Forces	140,907	589,132	226,686	—	956,725
Auxiliary Services	—	35,563	—	—	35,563
1949-50—					
Forces	37,595	133,117	168,582	—	339,294
Auxiliary Services	—	9,483	—	—	9,483
Netherlands	—	—	—	91,737	91,737
1950-51—					
Forces	21,318	76,348	344,717	—	442,383
1951-52—					
Forces	9,708	128,058	124,366	—	262,132
Special Force	1,340	18,208	—	—	19,548
1952-53—					
Forces	—	—	—	—	112,437
Special Force	600,036	2,769,829	26,567	—	3,396,432
1953-54—					
Forces	—	—	—	—	13,950
Special Force	289,441	2,161,760	25,646	—	2,476,846
Total	...	...	...	...	**475,695,574**

Re-establishment Credits.—Up to Mar. 31, 1954, 775,574 veterans re-establishment credit accounts had been closed, authorization having been given for the complete disposal of the credit. As of that date a cumulative total of $291,910,226 had been authorized for the various purposes listed in Table 2 and, in addition, $59,722,406 had been written off as the veterans concerned had chosen the alternative benefit of training, or had made application to settle under the Veterans' Land Act. Approximately 79 p.c. of the total re-establishment credit approved was used for homes. The expenditures made to Mar. 31, 1954, resulted from 2,036,654 approved applications for use of the credit.

2.—Re-establishment Credits Paid, by Required Purpose, Years Ended Mar. 31, 1953 and 1954, with Cumulative Totals to Mar. 31, 1954

Purpose	1953	1954	Cumulative Total to Mar. 31, 1954
	$	$	$
Homes—			
Purchased under National Housing Act	64,320	50,147	3,245,324
Purchased other than under National Housing Act	478,147	383,337	31,804,504
Repairs, etc	391,133	329,284	15,931,701
Furniture and equipment	4,627,488	4,116,749	174,785,145
Reduction of mortgage	60,578	60,259	4,373,989
Totals, Homes	**5,621,666**	**4,939,776**	**230,140,663**
Business—			
Purchase of a business	16,566	14,123	3,655,013
Working capital	403,823	381,256	24,507,104
Tools and equipment	744,130	606,928	25,059,457
Totals, Business	**1,164,519**	**1,002,307**	**53,221,574**
Miscellaneous—			
Insurance, annuities, etc	382,159	324,522	7,833,310
Special equipment for training	39,748	33,549	642,066
Clothing	19,925	25,792	72,613
Totals, Miscellaneous	**441,832**	**383,863**	**8,547,989**
Grand Totals	**7,228,017**	**6,325,946**	**291,910,226**

Casualty Rehabilitation.—The Casualty Welfare Division, whose function is to provide vocational guidance, training, assistance in securing suitable employment and vocational after-care, maintains a register of all those veterans whose disabilities in relation to other factors, such as education, previous employment experience and personality, constitute a serious problem in occupational adjustment.

There were, up to Mar. 31, 1954, 39,587 registrations with this Division, of which 6,100 were still active cases. The registration, according to the type of disability, is shown in the following statement:—

Type of Disability	*Active Cases*	*Closed Cases*
	No.	No.
Amputation	246	2,067
Neuro-muscular and skeletal system disabilities	1,372	10,942
Total and partial loss of hearing or sight	296	2,618
Neurological cases	287	1,211
Heart and vascular system	308	3,324
Respiratory disabilities	2,653	8,223
Mental and emotional disabilities	284	757
Unclassified	654	4,345
TOTALS	6,100	33,487

Among the national agencies with which the Department is in continuous liaison in connection with casualty welfare are: the Army, Navy and Air Force Veterans Association; the Canadian Legion, BESL; the Canadian National Institute for the Blind; the Canadian Paraplegic Association; the Canadian Red Cross Society; the Canadian Tuberculosis Association; the National Society of the Deaf and Hard of Hearing; and War Amputations of Canada.

During the fiscal year ended Mar. 31, 1954, the total number of registrants increased by 1,502 cases but the number of active cases decreased by 562. Progress in the rehabilitation of the cases between Mar. 31, 1953 and Mar. 31, 1954, was as follows:—

Status	*Mar. 31, 1953*	*Mar. 31, 1954*
	No.	No.
Employed	31,267	31,607
Unemployed	669	912
Receiving treatment, training or other services	2,887	2,716
Rehabilitation not feasible	2,088	2,319
Closed on WVA	1,174	1,228
Left Canada	—	805
TOTALS	38,085	39,587

Social Service.—The Social Service Section is staffed by professionally qualified social workers who act as consultants to Veterans Welfare Officers dealing with social problems of veterans and their dependants and handle the more complex problems directly. They also have the responsibility of training staff in social welfare principles and methods. The Section maintains close liaison with a wide variety of health and welfare agencies, both public and private, to ensure that veterans and their dependants obtain from the community all possible assistance to which they may be entitled as citizens.

At the request of the Department of National Defence, the Department of Veterans Affairs inquires into home circumstances of members of the Armed Forces. These inquiries are designed to assist the Department of National Defence in making administrative decisions regarding applications for compassionate leave, posting and discharge, and to help the dependants by counselling and, where necessary, by referring them to community agencies.

This Service was created to meet needs arising out of the expansion of the Armed Forces caused by the Korean situation, but the cessation of fighting there has not materially affected the demand. During the year ended Mar. 31, 1954, 3,561 cases were referred by the Department of National Defence, compared with 3,700 in the previous fiscal year.

Rehabilitation of Older Veterans.—Through its "Older Veterans" Welfare Adviser and Counsellors, the Department of Veterans Affairs continues to keep before employers of Canada the advantages offered in the employment of older veterans, with the result that, out of a present population of 340,000 veterans of World War I whose average age is nearly 65 years, fewer than 13,000 are registered with the National Employment Service as unemployed.

In these efforts the Department works in close co-operation with the employer associations and the Department of Labour; a number of plants have been surveyed for the purpose of assessing openings available to older age groups and other surveys are under way or projected. Active liaison is maintained with the Canadian

Welfare Council in the study of problems of the aged and with the Sub-Committee of Older Workers National Advisory Committee on manpower problems and rehabilitation of the aged. Also, the closest co-operation with the Department on behalf of older veterans is provided by national veterans organizations through their country-wide network of local committees. Collectively, about 50,000 individual cases are assisted annually.

Assistance Fund.—New Assistance Fund Regulations were made by Order in Council P.C. 3730, dated Aug. 6, 1952, following the revision of the War Veterans Allowance Act. A veteran or a widow receiving an allowance under the Act, with no other income, may, if considered to be in need under the Regulations, be granted up to $120 per annum from the Fund. Assistance is paid in the form of a continuing monthly grant in cases where income is insufficient to meet the cost of rent, fuel, food and health needs calculated according to the prescribed formula. In other cases, a single grant may be given to meet an emergency. Applicants are also assisted in obtaining financial aid from any other source to which they may be entitled, and to utilize all available community health and welfare resources.

During the year ended Mar. 31, 1954, District Committees awarded $155,334 in single payments and $192,127 in continuing monthly grants, a total of $347,461. Of 3,526 applicants during this period, 3,189 or 90 p.c. were assisted. In addition, 1,251 persons who applied in the previous year were assisted without making a further application.

Educational Assistance.—Assistance for the university training of veterans is provided under the Veterans Rehabilitation Act as outlined in the 1948-49 Year Book, pp. 321-322. Owing to the time limit of 15 months after discharge for commencing university training, the number of those beginning courses has diminished appreciably. The number being assisted during the academic year 1953-54 was approximately 630 of whom 55 were veterans of the Korean Force. This compares with 1,400 assisted in 1952-53 of whom 50 were from the Korean Force, 8,000 assisted in 1951-52, 8,000 in 1950-51, 15,000 in 1949-50, and a peak of 24,000 in 1948-49.

In addition to university training, about 640 veterans and merchant seamen received vocational training under the Veterans Rehabilitation Act during the 1953-54 fiscal year. Correspondence courses are also available to veterans—and to non-veterans who are arthritics, in TB sanatoria or provincial reform institutions—and to members of the Armed Forces. During the year ended Mar. 31, 1954, a total of 9,188 registrations for these courses were received, of which about two-thirds were from veterans.

The Educational Assistance Act (Children of War Dead) became effective July 1, 1953. The purpose of this legislation is to make it financially possible for pensioned sons and daughters of men who have died as a result of war service to proceed with educational training beyond the secondary school level. An eligible student may receive a monthly allowance of $25 while actually in full-time intramural attendance at an educational institution in Canada requiring high school graduation (or equivalent) for admission. Tuition and other fees on behalf of these students are payable in the same way, and under the same conditions, as for World War II or Korean Force veterans receiving educational training. Since the inception of this assistance, in July 1953, 306 applications for benefit have been approved.

Rehabilitation Benefits, Korean Force Veterans.—During the 1953-54 Session of Parliament, the Veterans Benefit Act was amended by including therein the regulations pertaining to benefits for those who served in the Korean theatre of war. Honourably discharged veterans of the Korean Force are eligible for the benefits available to veterans of World War II.

To be eligible for these benefits, a serviceman must have served in, or departed for, the theatre of operations prior to July 27, 1953, which was the date of the "cease fire". The period of entitlement ends when the serviceman next returned to North America, or was posted outside the Korean theatre, or Oct. 31, 1953, whichever is the earlier.

The benefits provided are contained in the following Acts: War Service Grants Act; Veterans Rehabilitation Act; Pension Act; Veterans' Land Act; Veterans Insurance Act; Reinstatement in Civil Employment Act; Civil Service Act; Veterans Business and Professional Loans Act; Public Service Superannuation Act; Unemployment Insurance Act.

The privileges of the War Veterans Allowance Act have also been made available to the Korean veterans on the same basis as for veterans of World Wars I and II.

The Veterans' Land Act.—In the year ended Mar. 31, 1954, 4,047 veterans were approved (net) for settlement under the Act (R.S.C. 1952, c. 280). Of this number 76 p.c. were small holders and the others were full-time farmers, commercial fishermen and settlers on Crown lands. This has been the settlement trend during recent years. At the end of March 1954, 65,140 veterans had been approved for financial assistance, involving a commitment of public funds amounting to $312,866,658. Active accounts numbered 58,460, including 1,406 Indians who were assisted to settle on reservations. The difference represents veterans who had terminated their contracts for various reasons, but only 116 of these terminations were a result of foreclosure or, with the consent of the Advisory Board in the province concerned, by rescission of contract.

Included also in the terminations are the first five veterans to fulfil the terms of their contracts and earn their conditional grants. In all five cases, the veterans' contracts were prepaid in full and they received title to both the real estate and chattels which they were assisted to purchase under the Act.

The payment record of the veterans continued to be favourable. Only 2 p.c. of 27,054 settlers paying on an annual or semi-annual basis, mostly farmers and fishermen, had arrears exceeding $200; and only one-tenth of 1 p.c. of 26,492 on a monthly basis, mainly small holders and a few fishermen, had arrears exceeding $100.

Approximately 15,800 veterans were meeting their payments by prearranged systems of payment. This number was made up of 1,170 share-of-crop agreements in effect in the spring wheat areas of the Prairie Provinces, 5,466 pension orders and salary assignments, and 9,184 veterans using the post-dated cheque plan, introduced in 1952. In addition, 2,203 veterans had completely prepaid their contract debts.

Supervision activity during the year continued with the objective of assisting the settlers to achieve increased security through the more efficient use of their properties and resources. In this respect much constructive effort was put forth during the year to neutralize, as far as possible, the effect of narrowing margins in those farm enterprises where selling prices for produce continued weak.

Analysis of 11,697 consecutive reports on small-holding properties during the year demonstrated that the majority of these veterans are using their properties as Parliament intended. On the basis of this analysis, 85 p.c. of the 27,757 active small-holding accounts had vegetable gardens, and about one-half of the total were producing, either for home use or sale, food worth at least the amount of their payments to the Administration. About 25 p.c. derived secondary incomes averaging more than $350 annually. The estimated value of the produce from all small holdings exceeded $6,500,000. In addition to these tangible returns, the analysis showed that about 60 p.c. have maintained and developed their properties so that these have substantially increased in value.

3.—Summary of Settlement Status, Loans and Grants under the Veterans' Land Act, as at Mar. 31, 1954

Item	Full-Time Farming	Small Holdings	Commercial Fishing	Provincial Lands	Federal Lands	Total
Qualified for settlement. No.	31,250	44,433	1,075	5,360	423	82,541
Approved for financial assistance............ No.	25,938	31,966	947	4,530	353	63,734
Amounts approved for land and permanent improvements....... $	98,647,581	157,393,167	2,837,973	4,302,503	759,987	263,941,211
Amounts approved for stock and equipment. $	31,111,942	7,751,164	993,599	5,862,388	11,990	45,731,083
Average amounts approved per veteran... $	5,003	5,166	4,046	2,244	2,187	4,859
Average conditional grants per veteran... $	1,950	1,387	1,748	2,244	2,187	1,686

In addition to the above, there were 1,406 Indian veterans on reserve lands for whom loans amounting to $1,826,797 for land and improvements and $1,367,567 for stock and equipment were approved.

New houses started during 1953-54 numbered 1,876, an increase of 44 p.c. over the previous year. Alterations and additions to existing properties numbered approximately 1,500, an increase of about 50 p.c. over 1952-53. Virtually all of the latter and 84 p.c. of the former were undertaken by the veterans themselves who acted as their own contractors and, in addition, did much of the unskilled and semi-skilled construction work. The number of new houses, completed or under construction, from inception of the Act in 1942 to the end of the 1953-54 fiscal year, was 18,549.

4.—Summary of House Construction under the Veterans' Land Act, as at Mar. 31, 1954

Item	Full-Time Farming	Small Holdings	Commercial Fishing	Provincial Lands	Federal Lands	Total
	No.	No.	No.	No.	No.	No.
Houses completed (from 1942)...........	1,248	13,866	232	1,183	91	16,620
Houses under construction..............	154	1,583	14	163	15	1,929
Houses projected.......................	281	755	11	157	1	1,205
Net Applications for New Housing.	**1,683**	**16,204**	**257**	**1,503**	**107**	**19,754**

During the 1953-54 Session of Parliament the Veterans' Land Act was amended by adding to the former Act (now known as Part I) Parts II and III. Part II provides for technical, supervisory and financial assistance to eligible veterans of World War II and the Special Force considered competent to contract to build their own homes on suitable lots of any size. Construction courses may be provided for prospective veteran contractors who need training before undertaking such a contract. To be eligible, a veteran must have had no benefits under Part I of the Act nor have received more than nine months of university training. The veteran must also be approved for a loan under the National Housing Act and, as a minimum down payment, must provide the Director with a lot worth at least $800 or pay the difference between the appraised value and that amount. Maximum assistance of $8,000 is made available in the form of interest-free advances as the work progresses. Upon completion of construction these advances are consolidated into a 25-year, 5½-p.c. mortgage in favour of Central Mortgage and Housing Corporation or an approved lender, the proceeds of which are used to reimburse the VLA Revolving Fund of $15,000,000 set up to finance operations. Under this Part of the Act, veterans receive no conditional grant, as under Part I, but they retain their right to re-establishment credit. Veterans also receive supervision during construction, free plans and drawings and legal services up to and including the deed and mortgage.

Part III provides for fully repayable, 5-p.c. loans up to $3,000 for full-time farmers already settled or to be settled, or $1,400 for small holders or commercial fishermen not yet settled, which may be authorized in addition to the assistance available under Part I. The loan may not be amortized over a longer period than the remainder of the veteran's existing contract under Part I. The veteran must contribute an amount equal to one-half of the loan, either in cash or equity in the form of excess payments or improvements to the property. Loans may be used to purchase land, erect buildings or effect improvements that will tend to increase production and promote soil conservation. With provision for these additional loans, maximum expenditures now possible under Parts I and III combined, when the veterans' contributions are included, amount to $10,500 in the case of full-time farmers and $8,100 in the case of small holders and commercial fishermen.

Veterans Insurance.*—The Veterans Insurance Act which came into force on Feb. 20, 1945, provides that the following persons may contract with the Government of Canada for life insurance, usually without medical examination, during the periods of eligibility shown:—

Eligibility arising out of Service in World War II:	*Applications must be approved by:*
(a) Veterans, and others deemed by Statute to be veterans.	Dec. 31, 1954 or 10 years after discharge, whichever is later.
(b) Members of the regular Forces who served during the War and were not discharged; Merchant Seamen if eligible to receive a special bonus or war service bonus; widows or widowers of veterans who did not have veterans insurance.	Dec. 31, 1954.
Eligibility arising out of Service in the Special Force since July 5, 1950:	
(c) Persons who served on the strength of the Special Force in a theatre of operations and who have been discharged; members of the regular Forces who have had such service in a theatre of operations; persons who were pensioned under the Pension Act because of a disability attributable to such service.	Oct. 31, 1958.
(d) Widows of veterans described in *(c)*.	Oct. 31, 1958, or within three months after the veteran's death, whichever is the later.
(e) Widows of persons who would have been eligible on discharge but who died before discharge.	Within three years after the death of the member of the Forces.

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* Revised by C. F. Black, Superintendent, Veterans Insurance, Department of Veterans Affairs, Ottawa.

The amount of insurance may be any multiple of $500 up to a maximum of $10,000. The plans of insurance available are 10-payment life, 15-payment life, 20-payment life, and life with premiums payable until age 65 or age 85. The policies are non-participating.

Premiums on veterans insurance may be paid monthly, quarterly, semi-annually or annually. They may be paid in cash or from re-establishment credit or by deduction from any pension granted under the Pension Act. The policy contracts include a waiver-of-premium disability provision. No extra premiums are charged for residence, travel or occupational hazards.

At the end of the second policy year a liberal cash value is available. It may by used alternatively to provide reduced paid-up insurance or extended term insurance. A veteran's insurance policy is not assignable, nor is a loan value granted.

The maximum amount of insurance money that will be paid in a lump sum at death is $2,000; the balance must be paid to the beneficiary as an annuity certain or as a life annuity with or without a guaranteed period.

5.—Summary Statistics of Veterans Insurance, Years Ended Mar. 31, 1949-54

Year Ended Mar. 31—	Insurance Issued During Year		Insurance in Force at End of Year		Death Claims Approved During Year	
	No.	$	No.	$	No.	$
1949	4,615	14,074,500	22,293	63,836,743	91	245,500
1950	2,316	7,448,500	23,722	68,016,514	111	340,080
1951	3,247	10,718,000	25,917	75,020,885	130	400,500
1952	2,302	8,322,500	26,985	79,115,734	158	346,500
1953	2,167	7,849,000	27,731	81,826,281	186	530,000
1954	1,666	6,109,500	27,909	82,619,669	192	532,500

War Veterans Allowance Act.—This Act (R.S.C. 1952, c. 340) is administered by the War Veterans Allowance Board. The allowance provides assistance to veterans with service in a theatre of actual war or who, in lieu of such service, are in receipt of disability pensions and have reached the age of 60, or earlier if their physical condition prevents them from earning their own living. Veterans who served in both World Wars I and II, but not in a theatre of actual war in either, are also eligible when they reach the age of 60, or earlier if they become permanently unemployable. The allowance may also be paid to the widows of veterans who would themselves have been qualified, but in the case of widows it is payable at the age of 55, or earlier if their physical condition makes the allowance necessary. The allowance is not paid as a right but is subject to certain financial tests.

The Act was completely revised in 1952, and the new rates and other changes, introduced at that time, are set forth in detail in the 1954 Year Book, pp. 275-276. A report on the Assistance Fund, introduced at the same time for War Veterans Allowance recipients, is given on p. 288.

As at Mar. 31, 1954, there were 43,446 WVA recipients including 10,706 widows. The liability for 1953-54 was $27,725,852.

CHAPTER VII.—CRIME AND DELINQUENCY*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Canadian Criminal Law and Procedure†

The system under which justice is administered in a State is never rigid. To have it so would be neither expedient nor indeed possible. A judicial system has to grow and adapt itself to the requirements of the people, and the exact limits of the powers of different legislative bodies require continued definition.

The criminal law of Canada has as its foundation the criminal common law of England built up through the ages and consisting first of customs and usages, and later expanded by principles enunciated by generations of judges. There is no statutory declaration of the introduction of English criminal law into those parts of Canada that are now the provinces of New Brunswick, Nova Scotia and Prince Edward Island. Its introduction there depends upon a principle of the common law itself by which English law was declared to be in force in uninhabited territory discovered and planted by British subjects, except in so far as local conditions made it inapplicable. The same may be said of Newfoundland, although the colony dealt with the subject in a statute of 1837. In Quebec its reception depends upon a Royal Proclamation of 1763 and the Quebec Act of 1774. In each of the other provinces and in the Yukon and Northwest Territories the matter has been dealt with by statute.

The judicial systems of the provinces as they exist to-day are based upon the British North America Act of 1867. Sect. 91 of that Act provides that "The exclusive legislative authority of the Parliament of Canada extends to . . . the criminal law, except the constitution of courts of criminal jurisdiction but including the procedure in criminal matters". By Sect. 92 (14), the legislature of the province exclusively may make laws in relation to "the administration of justice in the province, including the constitution, maintenance and organization of provincial courts, both of civil and criminal jurisdiction and including procedure in civil matters in its courts". The Parliament of Canada may, however (Sect. 101), establish any additional courts for the better administration of the laws of Canada. It should be noted that the Statute of Westminster, 1931, effected important changes particularly by abrogating the Colonial Laws Validity Act, 1865 (U.K.), and confirming the right of a dominion to make laws having extraterritorial operation. Particulars of the federal judiciaries are given in Chapter II, pp. 70-72, and provincial judiciaries are dealt with briefly at pp. 72-73; more detailed information on provincial judiciaries is given in the 1954 Year Book, pp. 48-55.

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* Except as otherwise credited, this Chapter has been revised in the Judicial Section, Health and Welfare Division, Dominion Bureau of Statistics.

† Prepared by the Criminal Law Section, Department of Justice, Ottawa.

At the time of Confederation, each of the colonies affected had its own body of statutes relating to the criminal law. In 1869, in an endeavour to assimilate them into a uniform system applicable throughout Canada, Parliament passed a series of Acts some of which dealt with offences of special kinds, and others with procedure. Most notable of the latter was the Criminal Procedure Act, but other Acts provided for the speedy trial or summary trial of indictable offences, the powers and jurisdiction of justices of the peace in summary conviction matters and otherwise, and the procedure in respect of juvenile offenders.

Codification of the criminal law through a Criminal Code Bill founded on the English draft code of 1878, Stephen's *Digest of Criminal Law,* Burbidge's *Digest of the Canadian Criminal Law,* and the relevant Canadian statutes, was brought about by the Minister of Justice, Sir John Thompson, in 1892. This Bill became the Criminal Code of Canada and came into force on July 1, 1893. It must be remembered, however, that the Criminal Code was not exhaustive of the criminal law. It was still necessary to refer to English law in certain matters of procedure and it was still possible to prosecute for offences at common law. Moreover, Parliament has declared offences against certain other Acts, e.g., the Opium and Narcotic Drug Act, to be criminal offences and the same was done in the Defence of Canada Regulations and the Wartime Prices and Trade Board Regulations (neither now in force) promulgated under the authority of the War Measures Act.

It is often difficult to distinguish between "law" and "procedure". Procedure may be interpreted to relate simply to the organic working of the courts but, in a wider sense, it may also affect the rights or alter the legal relations arising out of any given state of facts. For present purposes, it will be useful to note that writers on jurisprudence describe law as being substantive or adjective. "Substantive law is concerned with the ends which the administration of justice seeks; procedural (adjective) law deals with the means and instruments by which these ends are to be obtained."*

With reference to the criminal law, the former may be taken to include the provisions concerning criminal responsibility, the definition of "offences" and the punishment for those offences, and the latter to include provisions for enforcement, e.g., powers to search and to arrest, for the modes of trial and for the proof of facts. Broadly speaking, the Criminal Code observes the distinction although it might appear that the provisions for preventive detention of habitual criminals and criminal sexual psychopaths partake of the nature of both classes.

In February 1952, a Royal Commission, appointed three years earlier for the purpose of making a complete revision of the Criminal Code, presented its report with a draft Bill. This has since been before successive sessions of Parliament and received final passage on June 15, 1954. The new Code, in force on Apr. 1, 1955, effects changes in all the categories outlined above, but before making any commen upon them, there should be some mention of the system that existed under the repealed Code.

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* Salmond on *Jurisprudence,* 7th Edition, p. 496.

Offences under the Criminal Code were made either indictable or non-indictable, that is to say, punishable on summary conviction, instead of being, as under English law, felonies or misdemeanours. A few, for example, common assault and driving while intoxicated, were triable under either procedure.

Trial by jury was the accepted mode of trial of indictable offences, but this was subject to such exceptions that in practice the proportion of indictable offences so tried was very small. Over a few, a magistrate acting under Part XVI of the Code without a jury had absolute jurisdiction. In all but a few of the other cases the accused might choose summary trial before such a magistrate, or he might choose speedy trial, again without a jury, before a judge defined in Sect. 823 to include a judge of the county or district court and, in the Province of Quebec, a judge of the Sessions of the Peace or a district magistrate. However, this right to elect was subject to a prerogative of the Attorney General to require trial by jury where the offence charged was punishable by imprisonment for more than five years. The offences which did not permit this election were treason and treasonable offences, assaults on the Sovereign, mutiny, unlawfully obtaining and communicating official information, the taking of oaths to commit certain crimes, seditious offences, libels on foreign sovereigns, spreading false news, piracy, corruption of judicial officers or officers employed in prosecuting offenders, frauds on the government, breach of trust by public officers, municipal corruption, the selling of appointments to any office, murder, attempt to murder, conspiracy to murder, accessory after the fact to murder, manslaughter, rape, or attempt to commit rape, defamatory libel, combination in restraint of trade, conspiring or attempting to commit or being accessory after the fact to the other offences mentioned, also offences against the Canada Election Act including bribery or undue influence, personation or other corrupt practice.

Capital offences included treason as defined, murder, piracy in cases of violence, and rape. This is a drastic modification of the criminal law as it stood a century and a half ago. Further details of law and procedure are given in the 1951 Year Book, pp. 256-258.

Although the new Code effects changes in detail it continues the general features of the former system.

Turning now to the changes effected by the new Code, the following will indicate the most important, although by no means all of them.

With reference to the capacity to commit crime, the exemption of persons under 14 years of age from a charge of rape is expanded to include some other sexual offences. The law concerning infanticide, which had been the subject of some judicial criticism, has been modified by definition, and provision is made whereby a justice holding a preliminary hearing may remand the accused woman for mental examination. However, if at her trial on such a charge it appears that she caused the death of her child but it is not established that she was mentally disturbed within the definition, she is not entitled to be acquitted unless she establishes that her act was not wilful.

The following new offences are specified:—

(a) The giving of evidence by a witness in a judicial proceeding contradictory to evidence given by him in a previous judicial proceeding (Sect. 116).

(b) Trespass at night on property near to a dwelling house thereon (Sect. 162).

(c) The former Sect. 399, under which it was an offence to receive or retain anything obtained by crime, has been altered (Sect. 297) so as to make it an offence to have anything in possession knowing that it was so obtained.

(d) The fraudulent use of slugs or other material in machines that vend merchandise or services or collect fares or tolls has been made an offence (Sect. 397).

It will no longer be possible to lay charges at common law nor under English statutes nor under pre-confederation statutes or ordinances (Sect. 7). By way of complement to this provision certain common law offences have been codified, namely, indemnification of bail [Sect. 119(2)(d)], public mischief (Sect. 120), compounding of felony (Sect. 121), and common law conspiracy [Sect. 408(2)].

Treason has been redefined with emphasis on the security of the State, although the traditional elements of the offence are continued. The definition includes the communication of military or scientific information to an agent of a State other than Canada by a person who knows or ought to know that that other State may use it for purposes prejudicial to the safety or defence of Canada, a provision new in this context. Punishment of 14 years' imprisonment is prescribed for such spying in time of peace.

There is an important change in that criminal negligence has been made a distinct offence, the gravamen of which is a wanton or reckless disregard for the lives or safety of others (Sects. 191 to 193). Sect. 221 deals specially with this offence when committed in the operation of a motor-vehicle.

The former Sect. 206 relating to gross indecency has been made to apply to both sexes (Sect. 149).

Breach of contract continues to be a crime under certain circumstances, particularly in reference to public utilities. In this regard the former Sect. 499 has been redrawn with certain savings in the interests of organized labour (Sect. 365). The law with regard to wilful damage to property has been largely consolidated with similar saving clauses in Sects. 52 (sabotage) and 372.

Leaving aside the matter of capital punishment with the observation that the new Code does not continue it for the offence of rape, it may be said that minimum punishments are not prescribed except for thefts from the post office, driving a motor-vehicle while intoxicated or with impaired ability, and for criminal sexual psychopaths. With regard to these motoring offences the power to prohibit driving is made applicable to a person convicted of driving with impaired ability.

Except in cases of defamatory libel and in summary conviction matters, the courts are not empowered to order the payment of costs in criminal cases.

A general penalty in summary conviction matters has been provided [Sect. 694(2)] leaving it to the courts to apply it appropriately in individual cases.

The former Sect. 1081 provided that in certain instances a court could not suspend sentence without the consent of the Crown. This requirement has been eliminated.

Under the new Code a peace officer will be able to seize not only things mentioned in a search warrant but also things not so mentioned that "on reasonable grounds he believes have been obtained by or have been used in the commission of an offence" (Sect. 431). There is also a provision whereby a person interested in goods under seizure may obtain an order permitting him to examine them and to appeal against an order of forfeiture.

The former detailed provisions limiting the time in which prosecutions should be begun have largely disappeared. They are continued only with reference to treason [Sect. 48(1)], certain sexual offences [Sect. 184(4)] and summary conviction matters [Sect. 693(2)]. Sect. 672(2) prescribes a limitation for the bringing of penal actions.

A new provision (Sect. 671) will prevent the discharge of sureties under a recognizance by reason of the arrest of their principal for an offence committed while he is on bail.

With respect to evidence, there has been codification of a common law rule to require that on charges of rape and other sexual offences the judge must charge the jury that it is unsafe to convict on the evidence of the prosecutrix unless it is corroborated or unless they are satisfied of its truth beyond a reasonable doubt. Other changes in respect of corroborative evidence are that it is to be required in cases of incest but not upon charges of living on the avails of prostitution, of a householder permitting defilement, or of conspiracy to defile.

Provision to facilitate the proof of marriage in cases of bigamy is provided in Sect. 241. By Subsection (2) a certificate of marriage issued under the authority of law becomes *prima facie* evidence of the marriage or form of marriage to which it relates, without formal proof of signature.

It is perhaps with reference to trial procedure that the most far-reaching changes have been made. A rule of practice in England, not grounded in statute, whereby an accused may ask that outstanding offences be taken into consideration in passing sentence upon him, has been placed in the Code [Sect. 421(3)]. This will apply to permit that offences committed by the accused in one province may be taken into consideration in proceedings against him in another, provided that the Attorney General of the province first mentioned consents to this being done.

There is provision that an offence committed on a vehicle, vessel or aircraft during the course of a journey may be tried in any jurisdiction through or over which the journey proceeded (Sect. 419). This modifies the former Sect. 584(c).

The absolute jurisdiction of magistrates under Part XVI has been changed by taking out the cases of indecent assault which were formerly subject to it, and by adding to it the offences in respect of lotteries, and cheating at play.

There will be a right to elect for a non-jury trial in cases of spreading false news, fraud on government, breach of trust by public officer, municipal corruption and defamatory libel. This is the effect of removing these offences from the list of offences specified on p. 295 (*cf.* Sect. 413 and the former Sect. 583). It should be noted too that a judge or magistrate trying an indictable offence will have power under the new Code to try an issue of insanity if the question arises before him. In this, Sects. 523 and 524 extend the provisions of the former Sects. 966 and 967.

There is an important change embodied in Sect. 9 which gives a right of appeal to a person summarily convicted of contempt of court.

It has been mentioned that a general penalty has been provided in summary conviction matters. It may be mentioned finally that punishment by imprisonment for indictable offences has been appropriated to a scale, namely, two years, five years, 10 years, 14 years, life.

Attention must be called to the fact that the subjects of capital and corporal punishment, as well as the law relating to lotteries, are being studied by a joint committee of the Senate and House of Commons, and that a Royal Commission has been appointed to consider questions of mental health in their relation to the criminal law.

Section 2.—Adult Offenders and Convictions

The main interest in criminal statistics is concerned with those persons guilty of the more serious crimes. Such offenders are fewer than those who commit non-indictable offences but, from the standpoint of the protection of society, they are more important.

In 1949, the basis of the statistics of indictable crimes was changed from *convictions* to *persons* so that the figures for 1949 and subsequent years are not comparable with those for previous years. Where any person is prosecuted at the same hearing for several offences, one offence has to be selected for tabulation. The rule followed is to select that for which the proceedings were carried to the furthest stage—to conviction and sentence if the prisoner were tried on several charges; if there were several convictions, the offence selected is that for which the heaviest punishment was awarded; if the final result of proceedings on two or more charges were the same, the most serious offence (as measured by the maximum penalty allowed by the law) appears in the tables. Where a person was prosecuted for one offence and convicted of another (e.g., charged with murder and convicted of manslaughter), the case appears only under the offence for which he was convicted.

In the case of non-indictable offences, the figures continue to be based on convictions and are thus comparable with those for earlier years.

Statistics include only cases finally determined within the year. Cases not entirely disposed of within the year (e.g., tried but sentence postponed) are held over for the next year's report.

In 1950 the reporting year for criminal statistics was changed from the 12 months ended Sept. 30 to the calendar year. Also, figures for Newfoundland were included for the first time in 1951.

Subsection 1.—Adults Convicted of Indictable Offences

During the year 1952, the courts of Canada dealt with 35,086 adults charged with 51,125 indictable crimes, of whom 29,761 were found guilty of 41,591 offences. This was an increase of 2·7 p.c. over the number of persons convicted in 1951.

1.—Adults Convicted of Indictable Offences and Ratio per 10,000 Population 16 Years of Age or Over, by Province, 1951 and 1952

Province or Territory	1951		1952	
	Persons Convicted	Ratio per 10,000 Population	Persons Convicted	Ratio per 10,000 Population
	No.	No.	No.	No.
Newfoundland	490	23	534	24
Prince Edward Island	109	17	89	14
Nova Scotia	1,296	31	1,216	28
New Brunswick	746	23	782	24
Quebec	5,726	22	5,723	21
Ontario	11,801	36	12,464	37
Manitoba	1,565	29	1,633	29
Saskatchewan	1,049	19	1,074	19
Alberta	2,302	36	2,452	37
British Columbia	3,821	45	3,703	43
Yukon and Northwest Territories	75	46	91	55
Canada	**28,980**	**30**	**29,761**	**30**

Indictable offences are grouped into six classes. Class I covers crimes against the person; persons convicted of assaults of various kinds and obstructing police represented 81·7 p.c. of this group in 1952. In that year, 18 persons were convicted of murder, three of attempted murder and 77 of manslaughter as compared with 15, 7 and 92, respectively, in 1951. The number of offenders in the class as a whole was 8·4 p.c. higher than in 1951.

Classes II, III, IV and V cover offences against property. Thieves predominate among the offenders in these classes though the number was slightly lower in 1952 than in 1951. Burglars and robbers whose serious crimes involve acts of violence are the next most numerous, and they increased by 4 p.c. in 1952 as compared with 1951. The number of persons who maliciously damaged property increased by 1·9 p.c. in the same comparison.

Miscellaneous offences are listed in Class VI. There were 367 offenders under the Opium and Narcotic Drug Act, of whom 316 were convicted of possessing heroin; 262 were males; and 327 were born in Canada. British Columbia courts convicted 69·2 p.c. of the drug offenders and Ontario courts 19·1 p.c.

2.—Adults Charged and Convicted of Indictable Offences, by Class of Offence, 1951 and 1952

Class and Offence	1951			1952			Increase or Decrease in Persons Convicted
	Adults Charged	Adults Convicted		Adults Charged	Adults Convicted		
		M.	F.		M.	F.	
	No.	No.	No.	No.	No.	No.	p.c.
Class I.—Offences against the Person—							
Abduction	24	13	2	20	14	—	− 2·7
Assault, common, aggravated and on police	4,551	3,298	193	5,042	3,640	234	+11·0
Offences against females[1]	1,154	823	30	1,183	852	25	+ 2·8
Manslaughter and murder	226	97	10	180	87	8	−11·2
Attempted murder; shooting and wounding	272	189	19	315	214	13	+ 9·1
Non-support, desertion	103	77	11	165	133	7	+59·1
Other offences against the person	412	332	21	362	297	19	−10·5
Totals, Class I	**6,742**	**4,829**	**286**	**7,267**	**5,237**	**306**	**+ 8·4**

For footnote, *see* end of table, p. 300.

2.—Adults Charged and Convicted of Indictable Offences, by Class of Offence, 1951 and 1952—concluded

Class and Offence	1951			1952			Increase or Decrease in Persons Convicted
	Adults Charged	Adults Convicted		Adults Charged	Adults Convicted		
		M.	F.		M.	F.	
	No.	No.	No.	No.	No.	No.	p.c.
Class II.—Offences against Property with Violence—							
Burglary and robbery	4,380	3,830	53	4,559	3,970	70	+ 4·0
Totals, Class II	**4,380**	**3,830**	**53**	**4,559**	**3,970**	**70**	**+ 4·0**
Class III.—Offences against Property without Violence—							
Fraud, embezzlement and false pretences	2,002	1,544	128	2,010	1,579	128	+ 2·1
Receiving stolen goods	1,081	815	48	1,055	779	64	− 2·3
Theft	11,222	9,051	820	11,216	8,953	826	− 0·9
Totals, Class III	**14,305**	**11,410**	**996**	**14,281**	**11,311**	**1,018**	**− 0·6**
Class IV.—Malicious Offences against Property—							
Arson	55	35	4	74	57	2	+51·3
Malicious damage to property	668	502	35	632	501	27	− 1·7
Totals, Class IV	**723**	**537**	**39**	**706**	**558**	**29**	**+ 1·9**
Class V.—Forgery and Other Offences against the Currency—							
Offences against currency	21	17	1	10	6	2	−55·6
Forgery and uttering forged documents	613	516	58	661	569	61	+ 9·8
Totals, Class V	**634**	**533**	**59**	**671**	**575**	**63**	**+ 7·8**
Class VI.—Offences not included in the Foregoing Classes—							
Dangerous or reckless driving	1,708	1,510	25	1,003	851	19	−43·3
Driving car while ability impaired	[2]	[2]	[2]	1,353	1,260	16	...
Driving car while drunk	2,192	1,917	30	1,727	1,482	25	−22·6
Opium and Narcotic Drug Act, offences against	424	238	115	441	262	105	+ 4·0
Gambling and lotteries	686	558	38	463	361	36	−33·4
Keeping bawdy houses and inmates	214	34	131	321	116	158	+66·1
Various	2,173	1,648	164	2,294	1,802	131	+ 6·7
Totals, Class VI	**7,397**	**5,905**	**503**	**7,602**	**6,134**	**490**	**+ 3·4**
Grand Totals	**34,181**	**27,044**	**1,936**	**35,086**	**27,785**	**1,976**	**+ 2·7**

[1] Offences against females include: abortion, assault against females or wife, indecent assault, carnal knowledge, incest, procuration, rape, attempted rape and seduction. [2] Offences reported under this classification for the first time in 1952.

ADULTS CONVICTED OF INDICTABLE OFFENCES BY CERTAIN CLASSES 1949—52

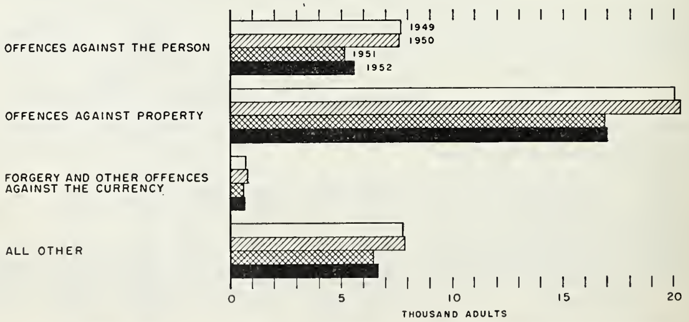

Table **3** shows that, in 1952, 58·7 p.c. of the persons convicted of indictable offences had not gone beyond elementary school grades in education, 40·0 p.c. were 24 years of age or younger, 11·3 p.c. were 45 years of age or over, and 73·8 p.c. lived in urban centres. Of these offenders, 93·4 p.c. were males; 89·8 p.c. were born in Canada; 55·2 p.c. were unmarried; 23·0 p.c. were recorded as labourers; and 6·9 p.c. had no remunerative employment. These percentages changed very little from comparable percentages for 1951.

3.—Persons Convicted of Indictable Offences, classified by Occupation, Marital Status, Sex, Birthplace, etc., 1951 and 1952

Item	1951	1952
	No.	No.
Type of Occupation—		
Agriculture	1,712	1,842
Armed Services	556	777
Clerical	838	792
Commercial and managerial	1,790	1,833
Construction	3,086	3,270
Finance and insurance	78	91
Fishing, trapping and logging	1,484	1,608
Labourer	6,861	6,839
Manufacturing and mechanical	3,290	3,118
Mining	687	779
Service—		
Domestic	681	599
Personal	972	1,038
Professional	223	260
Public and protective	186	153
Student	527	465
Other	138	97
Transportation and communications	3,090	3,208
Unemployed and retired[1]	1,896	2,043
Not given	885	949
Totals	**28,980**	**29,761**
Marital Status—		
Single	16,111	16,425
Married	10,889	11,052
Widowed	378	386
Divorced	151	191
Separated	579	613
Not given	872	1,094

Item	1951	1952
	No.	No.
Sex—		
Male	27,044	27,785
Female	1,936	1,976
Educational Status—		
Unable to read or write	915	847
Elementary	17,012	17,460
High School	7,781	8,214
Superior	696	590
Not given	2,576	2,650
Age—		
16 to 19 years	5,537	5,429
20 to 24 years	6,322	6,464
25 to 44 years	12,814	13,448
45 years or over	3,378	3,358
Not given	929	1,062
Birthplace—		
Canada	26,021	26,737
British Isles and other Commonwealth	885	828
United States	439	387
Europe	1,082	1,196
Asia	110	76
Other foreign countries	6	5
Not given	437	532
Residence—		
Urban centres	21,704	21,953
Rural districts	7,003	7,377
Not given	273	431

[1] Includes housewives.

Female Offenders.—There were 1,976 female offenders convicted of indictable offences in 1952. The Provinces of Ontario, Manitoba, British Columbia, and the Yukon and the Northwest Territories showed an increase over the previous reporting period. Nearly 44·3 p.c. of the women convicted in 1952 were found guilty of theft and receiving stolen goods, and 11·8 p.c. were committed for assault. Eight women were convicted of manslaughter.

4.—Females Convicted of Indictable Offences, by Province, 1951 and 1952

Province or Territory	Females Convicted		Females Convicted to Total Convictions	
	1951	1952	1951	1952
	No.	No.	p.c.	p.c.
Newfoundland	46	36	9·4	6·7
Prince Edward Island	3	1	2·8	1·1
Nova Scotia	74	59	5·7	4·9
New Brunswick	25	25	3·4	3·1
Quebec	349	344	6·1	6·0
Ontario	742	822	6·3	6·6
Manitoba	167	188	10·7	11·5
Saskatchewan	62	61	5·9	5·8
Alberta	178	146	7·7	6·0
British Columbia	287	288	7·5	7·8
Yukon and Northwest Territories	3	6	4·0	6·7
Canada	**1,936**	**1,976**	**6·7**	**6·6**

Persons with Multiple Convictions.—Table 5 shows the number of persons having more than one conviction at a court appearance for the years 1948-52. Multiple convictions occur most often in cases of forgery and uttering, false pretences, theft, receiving stolen goods and burglary.

5.—Persons Convicted of More than One Offence at the Time of Trial compared with Persons Convicted of One Offence, 1948-52

Note.—Figures for years prior to 1951 are for the 12 months ended Sept. 30; those for 1951 and 1952 are for the calendar year.

Item	1948	1949	1950	1951	1952
	No.	No.	No.	No.	No.
Persons Convicted of—					
2 offences	2,260	2,593	1,769	1,669	2,409
3 "	590	814	507	562	759
4 "	332	363	275	248	360
5 "	154	195	174	162	186
6 "	98	120	108	117	144
7 "	56	63	70	75	106
8 "	47	63	50	50	79
9 "	42	46	46	26	51
10 "	27	56	31	32	47
11 to 20 offences	93	107	88	84	139
21 offences or over	25	30	14	28	50
Totals, Convicted of More than One Offence	3,724	4,450	3,132	3,053	4,330
Totals, Convicted of One Offence	28,959	26,472	28,253	25,927	25,431
Grand Totals	**32,683**	**30,922**	**31,385**	**28,980**	**29,761**

Disposition of Cases and Recidivism.—Of all suspects before the courts for indictable crimes, 84·8 p.c. were adjudged guilty in 1952; the convictions against males (85·2 p.c.) constituted a higher percentage than those against females (79·8 p.c.) and varied greatly as between provinces. The Yukon and Northwest Territories together showed the highest percentage (100 p.c.) of convictions and Nova Scotia the lowest percentage (71·4 p.c.).

6.—Persons Charged and Convictions for Indictable Offences, by Province, 1951 and 1952

Province or Territory	1951			1952		
	Charges	Convictions		Charges	Convictions	
	No.	No.	p.c.	No.	No.	p.c.
Newfoundland	565	490	86·7	659	534	81·0
Prince Edward Island	112	109	97·3	93	89	95·7
Nova Scotia	1,733	1,296	74·8	1,703	1,216	71·4
New Brunswick	780	746	95·6	827	782	94·6
Quebec	6,357	5,726	90·1	6,506	5,723	88·0
Ontario	14,975	11,801	78·8	15,495	12,464	80·4
Manitoba	1,706	1,565	91·7	1,781	1,633	91·7
Saskatchewan	1,116	1,049	94·0	1,133	1,074	94·8
Alberta	2,426	2,302	94·4	2,642	2,452	92·8
British Columbia	4,333	3,821	88·2	4,156	3,703	89·1
Yukon and N.W.T.	78	75	96·2	91	91	100·0
Canada	**34,181**	**28,980**	84·8	**35,086**	**29,761**	84·8

In 1952, 49·0 p.c. of the convicted persons were first offenders, 8·2 p.c. had previously been found guilty of an offence and 20·7 p.c. had two or more earlier convictions. Court records for the remaining 22·1 p.c. were not obtained.

7.—Persons Charged with Indictable Offences and Disposition of Cases, 1951 and 1952

Item	1951	1952	Item	1951	1952
	No.	No.		No.	No.
Charges	34,181	35,086	Convictions—		
Acquittals	5,048	5,070	Males	27,044	27,785
Disagreement of jury	4	10	Females	1,936	1,976
Stay of proceedings	89	131	First convictions	15,881	14,565
No bill and *nolle prosequi*	20	63	Second convictions	2,502	2,448
Detention because of insanity	40	51	Reiterated convictions	5,975	6,162
			Not given	4,622	6,586

Sentences.—The types of sentences were in much the same proportion in 1951 and 1952. In the latter year, 31·9 p.c. of the persons convicted of indictable crimes were fined, 36·2 p.c. were sent to gaol without option of fine, 6·4 p.c. were committed to reformatories and 6·4 p.c. to penitentiaries, and 19·0 p.c. were given suspended sentences or put on probation. Five habitual criminals were given preventive detention. Eight persons received life sentences and 17 were given the death penalty.

8.—Sentences given for Indictable Offences, by Province, 1952 with Totals for 1951

Sentence	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada 1952	Canada 1951
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Option of fine	240	31	440	306	1,799	3,399	470	423	866	1,494	21	9,489	8,776
Gaol—													
Under one year	188	33	373	252	2,159	3,453	409	416	786	1,048	52	9,169	9,378
One year or over	21	2	18	8	374	293	175	97	297	326	2	1,613	1,479
Reformatory	—	—	8	7	38	1,699	59	9	13	71	—	1,904	1,705
Penitentiary—													
Two years and under five	8	6	85	59	614	429	62	28	149	201	1	1,642	1,605
Five years or over	1	1	8	1	110	89	6	3	19	29	—	267	278
Life	—	—	—	—	—	6	—	1	—	1	—	8	6
Preventive detention	—	—	1	—	—	—	2	—	1	1	—	5	1
Death	—	—	1	—	3	8	—	—	3	2	—	17	15
Suspended sentence or other disposition	76	16	282	149	626	3,088	450	97	318	530	15	5,647	5,737
Totals	**534**	**89**	**1,216**	**782**	**5,723**	**12,464**	**1,633**	**1,074**	**2,452**	**3,703**	**91**	**29,761**	**28,980**

Court Proceedings.—In 1952, 62·0 p.c. of the persons tried by jury were convicted; speedy trials (by court after waiver of jury trial) brought convictions in 73·4 p.c. of the cases so tried and summary trials by magistrates ended in convictions in 86·3 p.c. of the cases.

Of persons charged on indictment, 90·7 p.c. were tried by magistrate or family and juvenile court judge, 6·6 p.c. in county and district courts and 2·6 p.c. in higher courts.

9.—Method of Trial of Persons Charged with Indictable Crimes showing Disposition of Cases, by Sex and by Province, 1952

Method of Trial		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
By Jury—													
Convicted	M.	7	3	41	19	121	228	21	17	19	48	—	524
	F.	1	—	1	—	9	16	1	—	1	1	—	30
Acquitted	M.	1	—	23	11	42	116	9	8	5	56	—	271
	F.	1	—	1	—	—	14	—	—	2	2	—	20
Detained because of insanity	M.	—	—	—	—	1	1	1	—	—	—	—	3
	F.	—	—	—	—	—	1	1	—	—	—	—	2
Disagreement of Jury Stay of Proceedings No Bill and *Nolle Prosequi*	M.	4	—	2	5	1	24	1	—	—	3	—	40
	F.	—	—	—	—	1	2	—	—	—	1	—	4
By Speedy Trial—													
Convicted	M.	3	1	76	15	720	435	83	14	139	172	—	1,658
	F.	—	—	1	—	35	22	5	2	3	17	—	85
Acquitted	M.	—	1	29	1	279	150	25	7	24	50	—	566
	F.	—	—	2	—	22	14	3	1	3	4	—	49
Detained because of insanity	M.	—	—	—	—	—	1	—	—	—	—	—	1
Stay of Proceedings No Bill and *Nolle Prosequi*	M.	—	—	—	1	3	1	4	—	3	1	—	13
	F.	—	—	—	—	—	1	2	—	—	—	—	3
By Summary Trial—													
Convicted	M.	488	84	1,040	723	4,538	10,979	1,341	982	2,148	3,195	85	25,603
	F.	35	1	57	25	300	784	182	59	142	270	6	1,861
Acquitted	M.	111	3	375	25	331	2,442	47	36	139	251	—	3,760
	F.	8	—	46	1	43	243	4	6	14	39	—	404
Detained because of insanity	M.	—	—	9	1	9	19	—	1	—	4	—	43
	F.	—	—	—	—	1	1	—	—	—	—	—	2
Stay of Proceedings No Bill and *Nolle Prosequi*	M.	—	—	—	—	45	1	49	—	—	32	—	127
	F.	—	—	—	—	5	—	2	—	—	10	—	17
Totals, Persons Charged		**659**	**93**	**1,703**	**827**	**6,506**	**15,495**	**1,781**	**1,133**	**2,642**	**4,156**	**91**	**35,086**
Totals, Persons Convicted		**534**	**89**	**1,216**	**782**	**5,723**	**12,464**	**1,633**	**1,074**	**2,452**	**3,703**	**91**	**29,761**

10.—Persons Charged and Convicted of Indictable Crimes according to Trial Court, by Province, 1952

Province or Territory		Persons Charged and Convicted by—					Totals
		Police Magistrate or Recorder's Court	Justice of the Peace	Juvenile or Family Court	County Court	Higher Court	
		No.	No.	No.	No.	No.	No.
Newfoundland	Charged	612	—	30	3	14	659
	Convicted	493	—	30	3	8	534
P.E. Island	Charged	89	—	—	1	3	93
	Convicted	85	—	—	1	3	89
Nova Scotia	Charged	1,524	—	3	109	67	1,703
	Convicted	1,094	—	3	77	42	1,216
New Brunswick	Charged	774	—	5	27	21	827
	Convicted	743	—	5	21	13	782
Quebec	Charged	4,919	1	361	1,050	175	6,506
	Convicted	4,481	1	356	754	131	5,723
Ontario	Charged	14,469	—	40	587	399	15,495
	Convicted	11,727	—	36	457	244	12,464
Manitoba	Charged	1,491	—	141	118	31	1,781
	Convicted	1,382	—	141	88	22	1,633
Saskatchewan	Charged	1,076	2	6	24	25	1,133
	Convicted	1,033	2	6	16	17	1,074
Alberta	Charged	2,415	—	29	142	56	2,642
	Convicted	2,261	—	29	142	20	2,452
British Columbia	Charged	3,605	1	198	242	110	4,156
	Convicted	3,275	1	189	189	49	3,703
Yukon and N.W.T.	Charged	90	1	—	—	—	91
	Convicted	90	1	—	—	—	91
Canada	**Charged**	**31,064**	**5**	**813**	**2,303**	**901**	**35,086**
	Convicted	**26,664**	**5**	**795**	**1,748**	**549**	**29,761**

Subsection 2.—Young Adult Offenders (16-24 Years)

Young men and women from 16 to 24 years of age formed 40·0 p.c. of the criminal population who committed indictable offences in 1952, although they comprised only 19·8 p.c. of the total population of 16 years of age or over. As this age group includes some of the most daring offenders, who may be already experienced criminals, as well as first offenders likely to be turned from crime by further education and training, it seems worth while to give consideration to offenders in this group as distinct from offenders in the older age groups.

Almost 73 p.c. of the young offenders were tried in three provinces—Ontario (39·8 p.c.), Quebec (20·9 p.c.) and British Columbia (11·7 p.c.); 45·6 p.c. of them were still under 20 years of age.

11.—Young Adult Offenders, by Age Group, Sex and Province, 1952

Age Group and Sex		N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
		No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
16-17 years.....	M.	49	8	97	72	460	933	100	118	237	305	5	2,384
	F.	2	—	5	2	10	53	51	5	20	6	—	154
18-19 "	M.	47	9	114	82	571	1,125	140	105	229	286	4	2,712
	F.	3	—	3	4	22	70	22	13	18	24	—	179
20-24 "	M.	126	19	287	142	1,344	2,412	281	199	540	705	23	6,078
	F.	8	—	10	5	82	140	32	8	35	64	2	386
Totals.........		**235**	**36**	**516**	**307**	**2,489**	**4,733**	**626**	**448**	**1,079**	**1,390**	**34**	**11,893**

Over one-third (36·2 p.c.) of the men guilty of manslaughter in 1952 and 31 of the 41 convicted of rape were under 25 years of age. Two-thirds (64·6 p.c.) of the men guilty of robberies and burglaries were in this group; 44·7 p.c. of those convicted of offences against property without violence, which includes all thefts; 74·6 p.c. of those responsible for stolen automobiles; 51·1 p.c. of those who maliciously damaged property; 45·4 p.c. of those found carrying offensive weapons and 54·5 p.c. of the prison escapers.

There were 719 young women offenders under 25 years of age in 1952, 80 fewer than in 1951. Nearly half of them (353) were guilty of theft and receiving stolen goods. Of the 105 women offenders convicted under the Opium and Narcotic Drug Act, 37 were in this group, as well as 34 of the 61 found guilty of forgery and uttering; 42 of the 49 female prison escapers were also young women.

12.—Young Adult Offenders Convicted of Indictable Offences, by Class of Offence and Sex, 1951 and 1952

Class and Offence	1951		1952	
	Male	Female	Male	Female
	No.	No.	No.	No.
Class I.—Offences against the Person—				
Abduction	8	—	8	—
Assault, common and aggravated	1,076	46	803	45
Offences against females[1]	236	5	233	6
Manslaughter and murder	23	2	27	4
Attempted murder; shooting and wounding	58	5	57	—
Non-support, desertion and cruelty to children	8	8	16	2
Other offences against the person	94	8	462	18
Totals, Class I	**1,503**	**74**	**1,606**	**75**
Class II.—Offences against Property with Violence—				
Burglary and robbery	2,532	30	2,565	39
Totals, Class II	**2,532**	**30**	**2,565**	**39**
Class III.—Offences against Property without Violence—				
Fraud, embezzlement and false pretences	332	52	379	46
Receiving stolen goods	334	21	339	26
Theft	4,463	364	4,337	327
Totals, Class III	**5,129**	**437**	**5,055**	**399**

For footnote, *see* end of table.

12.—Young Adult Offenders Convicted of Indictable Offences, by Class of Offence and Sex, 1951 and 1952—concluded

Class and Offence	1951		1952	
	Male	Female	Male	Female
	No.	No.	No.	No.
Class IV.—Malicious Offences against Property—				
Arson	17	2	22	1
Malicious damage to property	270	16	263	9
Totals, Class IV	**287**	**18**	**285**	**10**
Class V.—Forgery and Other Offences against the Currency—				
Offences against currency	7	—	1	1
Forgery and uttering forged documents	179	35	197	34
Totals, Class V	**186**	**35**	**198**	**35**
Class VI.—Other Offences—				
Carrying unlawful weapons	100	2	83	1
Dangerous or reckless driving	395	7	242	2
Driving car while ability impaired	[2]	[2]	212	2
Driving car while drunk	284	3	233	—
Offences against public morals	33	41	5	11
Opium and Narcotic Drug Act, offences against	40	39	45	37
Gambling and lotteries	23	7	19	1
Keeping bawdy houses and inmates	3	43	6	49
Riots and unlawful assembly	133	7	194	1
Various	412	56	426	57
Totals, Class VI	**1,423**	**205**	**1,465**	**161**
Grand Totals	**11,060**	**799**	**11,174**	**719**

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[1] Offences against females include: abortion, assault against females, assault against wife, indecent assault, carnal knowledge, incest, procuration, rape, attempted rape, seduction and wife desertion.
[2] Offences were reported under this classification for the first time in 1952.

Table **13** shows the proportions of young offenders per 100,000 population in three age groups.

13.—Numbers per 100,000 Population of Young Adults Convicted of Indictable Offences, by Age Group, 1951 and 1952

Age Group	1951			1952		
	Offenders	Per 100,000 Population in Respective Group	Change from Preceding Year	Offenders	Per 100,000 Population in Respective Group	Change from Preceding Year
	No.		p.c.	No.		p.c.
16-17 years	2,780	659	− 5·0	2,538	596	− 8·7
18-19 "	2,757	652	−11·3	2,891	680	+ 4·9
20-24 "	6,322	581	− 5·9	6,464	588	+ 2·2

The sentences meted out to these young people varied somewhat from those given to offenders over 24 years of age. In 1952, a higher proportion of them were given suspended sentences, put on probation or sent to reformatories and a lower proportion were fined or given gaol sentences.

14.—Disposition of Sentences for Indictable Offences, by Sex, 1952

Disposition of Sentences	Males		Females	
	16-24 Years	25 Years or Over	16-24 Years	25 Years or Over
	p.c.	p.c.	p.c.	p.c.
Suspended sentence	16·0	10·1	18·8	17·3
Probation	8·7	3·6	18·5	9·8
Fined	24·3	37·0	20·0	37·9
Gaol	34·9	38·0	30·3	29·2
Reformatory	9·2	4·5	10·9	3·3
Penitentiary	6·9	6·7	1·5	2·5
Death	—	0·1	—	—

Through suspending sentence and probation supervising, many of these young offenders received another chance to make good, and reformatory training gave others an opportunity to better their employment possibilities. It is interesting to note that about one-third of the males under 25 were recorded as labourers, which indicates that they had no particular skill by which to earn a living; the proportion of male offenders over 25 years of age recorded as labourers was 21·2 p.c. Almost 4 p.c. of the youths were students and another 5·3 p.c. were unemployed as compared with 1·6 p.c. of the older men. Approximately three out of four of them lived in urban centres.

Of the young female offenders, 36·6 p.c. were not gainfully employed; domestic or personal service was the occupation of 36·2 p.c. and 84·7 p.c. lived in urban centres.

Since those convicted of non-indictable offences are not reported by age of offender, it is not possible to segregate young people of 16 to 24 years of age who have had summary convictions.

Subsection 3.—Convictions for Non-indictable Offences

Non-indictable offences—those not expressly made indictable—include all offences against provincial statutes and municipal by-laws. Non-indictable offences are triable by magistrate or justice of the peace under Part XV of the Criminal Code or under the provincial summary convictions Acts, as the case may be.

It is debatable how far summary convictions are of a criminal nature and how much their increase indicates an increase in crime. Many are breaches of municipal by-laws and contrary to public safety, health and comfort as, for example, parking violations or exercising callings without licence, but they do not involve violence, cruelty or serious dishonesty. On the other hand, offences as serious as cruelty to animals and contributing to juvenile delinquency are included under this classification and such indictable offences as common assault and driving with ability impaired may be tried on summary conviction.

Summary convictions increased by 19·7 p.c. to 1,565,707 in 1952 from 1,308,466 in 1951. Increases were general in all provinces.

15.—Convictions for Non-indictable Offences, by Province, Years Ended Sept. 30, 1943-50, and Dec. 31, 1951-52

NOTE.—Figures for years before 1951 are for the 12 months ended Sept. 30; 1951 and 1952 figures are for the calendar year. Statistics for the intervening months, October-December 1950, are given in DBS report, *Statistics of Criminal and Other Offences*. Figures for 1900-42 are given in the corresponding table of previous Year Books beginning with the 1933 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943.....	...	1,033	8,857	7,619	181,425	204,227	21,986	7,810	11,598	20,510	145	105	465,315
1944.....	...	1,287	8,760	9,533	146,593	199,938	22,602	7,788	11,950	21,866	336	74	430,727
1945.....	...	1,394	9,786	9,818	158,580	209,713	22,820	8,996	11,576	22,887	312	36	455,918
1946.....	...	2,715	12,915	13,925	176,996	354,154	36,014	13,985	16,289	32,203	234	242	659,672
1947.....	...	2,806	12,019	14,097	188,835	407,334	47,170	15,263	18,696	45,585	328	325	752,458
1948.....	...	2,696	13,699	12,189	228,502	445,911	52,783	15,488	19,748	85,006	385	238	876,645
1949.....	..	3,118	12,617	13,131	232,132	510,837	72,023	16,465	25,551	94,326	232	57	980,489
1950.....	..	2,095	13,137	21,732	280,868	617,565	79,079	22,717	28,344	117,729	553	172	1,183,991
1951.....	5,022	2,195	14,850	25,660	267,648	671,893	118,217	22,467	39,956	139,304	950	304	1,308,466
1952.....	6,191	2,578	14,977	31,905	312,892	819,253	135,034	31,618	50,443	158,967	1,342	507	1,565,707

In considering statistics of summary convictions, it should be remembered that such convictions are greatly influenced by the customs of the people and by the application and degree of enforcement of municipal regulations. These differ from place to place and from year to year and affect non-indictable offences more than they do indictable crimes.

In 1952 marked increases appeared in offences against the Merchant Seamen's Act, the Immigration Act, the Weights and Measures Act and the Income Tax Act. Misdemeanours against public health, revenue laws and public morals also increased. Offsetting these increases were decided decreases in convictions for offences against the Excise Act (35·8 p.c.), the Wartime Prices and Trade Board Act (35·3 p.c.) which should decline yearly, gambling Acts (26·5 p.c.), provincial Acts (22·5 p.c.).

16.—Convictions for Non-indictable Offences, by Type, Years Ended Sept. 30, 1948-50, and Dec. 31, 1951-52

NOTE.—*See* headnote to Table 15.

Type of Offence	1948	1949	1950	1951	1952	Increase or Decrease 1951-52
	No.	No.	No.	No.	No.	p.c.
Assault (common)......................	4,416	4,607	3,906	4,046	4,546	+12·4
Disturbing the peace....................	7,544	11,018	10,568	12,210	12,760	+ 4·5
Drunkenness............................	70,542	75,931	75,935	83,898	85,682	+ 2·1
Vagrancy................................	9,051	8,576	8,967	6,893	6,956	+ 0·9
Damage to property......................	1,537	1,675	1,720	1,678	2,143	+27·7
Gambling Acts, offences against.........	5,523	6,360	4,818	3,613	2,656	−26·5
Bawdy houses (frequenting).............	1,111	586	480	273	434	+59·0
Non-support and neglecting children.....	4,524	4,217	4,459	4,609	5,178	+12·3
Contributing to delinquency............	1,272	1,087	1,126	932	1,349	+44·7
Traffic regulations......................	649,599	761,467	938,549	1,065,426	1,311,022	+23·1
Provincial and Federal Acts—						
Game and Fishing Acts..............	4,753	5,854	6,144	5,996	5,839	− 2·6
Indian Act..........................	1,570	2,386	2,426	2,213	2,549	+15·2
Liquor Control and Temperance Acts.	27,744	28,259	31,738	28,405	33,335	+17·4
Lord's Day Act......................	1,428	1,014	2,072	749	666	−11·1
Radio without a licence..............	10,693	12,235	10,642	12,418	11,273	− 9·2
Railway Acts........................	1,735	1,827	2,278	1,266	1,427	+12·7
Revenue Laws[1]......................	2,690	2,704	3,175	5,292	6,259	+18·3
Other provincial and federal Acts.....	23,006	13,240	20,399	18,980^{r}	17,446	− 8·1
Municipal by-laws, breaches of..........	40,552	30,387	44,349	40,621	44,258	+ 9·0
Exercising various callings without licence................................	1,178	1,359	2,580	2,349	2,433	+ 3·6
Other offences..........................	6,177	5,700	7,660	6,599^{r}	7,496	+13·6
Totals, Convictions........	**876,645**	**980,489**	**1,183,991**	**1,308,466**	**1,565,707**	+19·7

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[1] Includes Excise and Income Tax Acts.

Breaches of Traffic Regulations.—Each year breaches of traffic regulations constitute a greater proportion of the total convictions for non-indictable offences. In 1952 they amounted to 83·7 p.c., an increase of 23·1 p.c. over 1951, which alone would account for the increase in summary convictions; 98·7 p.c. of them were offences under provincial highway traffic Acts and municipal by-laws.

17.—Convictions for Breaches of Traffic Regulations, by Province, Years Ended Sept. 30, 1943-50, and Dec. 31, 1951-52

Note.—*See* headnote to Table **15**, p. 309.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943......	...	209	2,772	1,722	82,884	152,557	16,074	2,961	4,745	10,628	21	274,573
1944......	...	326	1,591	1,838	85,134	146,849	16,268	2,864	4,754	10,387	10	270,021
1945......	...	157	1,359	2,211	100,708	149,903	14,886	2,838	3,774	10,985	4	286,825
1946......	...	327	1,707	2,014	123,915	271,379	26,266	5,253	5,574	17,193	2	453,630
1947......	...	556	2,370	2,667	138,321	315,412	36,526	6,141	7,476	28,043	7	537,519
1948......	...	393	4,607	2,469	174,021	352,253	41,074	6,300	7,984	60,493	5	649,599
1949......	..	519	4,084	3,729	188,003	417,016	60,127	7,274	11,112	69,545	58	761,467
1950......	..	366	4,265	11,909	227,857	508,010	67,832	12,362	13,772	92,038	138	938,549
1951......	1,773	580	5,802	15,641	215,222	570,895	106,262	13,325	22,923	112,738	265	1,065,426
1952......	2,565	765	5,109	20,358	266,835	714,810	122,647	19,749	25,693	132,123	368	1,311,022

For the year 1952, Ontario, with 40·9 p.c. of the registrations of motor-vehicles in Canada, had 54·5 p.c. of the total convictions for breaches of traffic regulations; Quebec in the same year had 18·2 p.c. of the motor-vehicles and 20·4 p.c. of the convictions. In interpreting the figures in this way, however, it should be pointed out that traffic regulations are by no means uniform throughout Canada and no account is taken of the differences in the degrees of urbanization in the provinces. These two provinces have large urban centres, but in provinces with lower degrees of urbanization, such as the Atlantic Provinces, Saskatchewan and Alberta, convictions are lower when considered in proportion to the number of motor-vehicles registered.

Convictions for Drunkenness and Offences against the Liquor Acts.—In considering these convictions, it should be noted that the same person may and often does appear before the courts on such charges more than once within a year and that the number of convictions may thus be well above the number of persons convicted.

18.—Convictions for Drunkenness, by Province, Years Ended Sept. 30, 1943-50, and Dec. 31, 1951-52

Note.—*See* headnote to Table **15**, p. 309.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N. W. T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943.......	...	332	2,380	3,489	10,363	17,482	1,885	778	1,462	4,055	51	15	42,292
1944.......	...	395	2,068	4,292	8,843	17,258	1,451	864	1,539	4,744	54	13	41,521
1945.......	...	612	3,064	4,158	10,336	19,573	2,040	1,010	1,515	4,342	85	10	46,745
1946.......	...	1,478	4,754	7,754	7,167	29,698	2,685	1,847	2,596	5,974	85	38	64,076
1947.......	...	1,187	4,907	6,584	11,006	31,218	2,510	1,802	2,632	8,801	184	37	70,868
1948.......	...	969	4,151	4,900	11,015	33,446	2,829	1,392	2,580	9,135	101	24	70,542
1949.......	..	1,089	4,363	5,125	10,419	33,797	3,613	1,497	4,656	11,237	126	9	75,931
1950.......	..	907	3,931	4,980	10,942	35,356	2,984	1,503	3,849	11,180	240	63	75,935
1951.......	844	759	4,432	6,036	10,222	38,577	3,098	1,915	4,691	13,007	213	104	83,898
1952.......	786	1,049	5,457	6,550	10,702	36,344	3,272	2,264	5,141	13,479	462	176	85,682

There is general interest in the relation of alcoholism to crime but, when examining statistics to support the assumption that some crimes are associated with the consumption of liquor, it should be observed that accurate interpretation would necessitate allowance for population variables such as age and sex distribution and other classifications according to social and economic status, etc.

19.—Convictions for Offences against the Liquor Acts, by Province, Years Ended Sept. 30, 1943-50, and Dec. 31, 1951-52

Note.—*See* headnote to Table **15**, p. 309.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon	N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943	...	118	1,369	473	2,070	6,751	1,086	1,099	1,106	944	47	36	15,099
1944	...	56	2,240	814	1,287	8,332	1,057	1,010	1,108	1,047	119	23	17,093
1945	...	155	2,324	911	2,626	10,655	1,429	1,416	1,454	1,215	39	13	22,237
1946	...	374	3,436	1,411	2,274	15,779	2,059	2,697	2,514	2,615	57	146	33,362
1947	...	354	2,503	1,742	1,494	12,889	2,229	2,712	2,623	1,741	46	153	28,486
1948	...	329	2,274	1,274	1,519	13,891	1,921	2,311	2,670	1,443	39	73	27,744
1949	..	439	2,053	1,278	1,969	14,339	1,574	2,418	3,081	1,098	—	10	28,259
1950	..	268	2,192	1,172	3,121	15,761	1,980	2,478	3,504	1,164	64	34	31,738
1951	371	266	2,273	818	1,467	14,104	1,961	2,005	3,757	1,251	88	44	28,405
1952	475	284	2,236	1,172	777	15,050	2,314	2,527	6,782	1,381	243	94	33,335

Convictions of Females.—The number of convictions against females for non-indictable offences has increased steadily each year since 1944. The increase in 1952 over 1951 amounted to 20·0 p.c., Manitoba, the Yukon and Northwest Territories, Newfoundland, Nova Scotia and Prince Edward Island recording the highest percentages at 257·8, 166·6, 50·0, 45·4, and 42·5, respectively. Only two provinces, Quebec and Saskatchewan, recorded decreases.

Traffic offences for which women were responsible increased in 1952 over 1951 by 23·8 p.c. and caused 85·3 p.c. of the summary convictions against women.

20.—Convictions of Females for Non-indictable Offences, by Province, Years Ended Sept. 30, 1948-50, and Dec. 31, 1951-52

Note.—*See* headnote to Table **15**, p. 309.

Province or Territory	Numbers of Convictions					Percentages of Convictions of Females to Total Convictions				
	1948	1949	1950	1951	1952	1948	1949	1950	1951	1952
Newfoundland	...	..	..	206	309	...	..	..	4·1	5·0
Prince Edward Island	65	66	67	40	57	2·5	2·1	3·2	1·8	2·2
Nova Scotia	469	349	389	471	685	3·5	2·8	3·0	3·2	4·6
New Brunswick	348	373	446	501	611	2·9	2·8	2·1	2·0	1·9
Quebec	6,803	7,404	10,398	9,056	7,156	3·7	3·2	3·7	3·4	2·3
Ontario	33,360	42,022	56,225	57,135	69,057	8·1	8·2	9·1	8·5	8·4
Manitoba	1,812	2,135	1,684	1,745	6,244	3·6	3·0	2·1	1·5	4·6
Saskatchewan	513	476	595	592	570	3·4	2·9	2·6	2·6	1·8
Alberta	1,156	1,224	1,194	1,208	1,568	6·2	4·8	4·2	3·0	3·1
British Columbia	7,254	7,216	9,972	13,596	15,109	9·3	7·7	8·5	9·8	9·5
Yukon and N.W.T.	76	16	42	51	136	13·9	5·5	5·8	4·1	7·4
Canada	**51,856**	**61,281**	**81,012**	**84,601**	**101,502**	**6·3**	**6·3**	**6·8**	**6·5**	**6·5**

Subsection 4.—Appeals

The disposition of appeals dealt with by the Supreme Court of Canada and the provincial supreme courts in criminal cases, together with the disposition of those dealt with by county and district courts against summary convictions is shown, by province, in Table 21 for the year 1952.

21.—Appeals in Indictable and Summary Conviction Cases, by Province, 1952

Province or Court	Indictable Offences											
	Appeals Disposed of by Courts	Crown Appeal					Appeal of Accused					
		From Acquittal			From Sentence		From Conviction				From Sentence	
		Dismissed	New Trial	Conviction	Dismissed	Varied	Dismissed	Acquitted	New Trial	Substituted Verdict	Dismissed	Varied
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N'f'ld......	—	—	—	—	—	—	—	—	—	—	—	—
P.E.I.......	1	—	—	—	—	—	—	—	—	—	—	1
N.S........	7	—	—	—	—	—	4	—	2	—	—	1
N.B........	10	—	—	—	—	—	7	2	—	—	—	1
Que........	78	5	—	3	—	—	41	12	4	—	7	6
Ont........	318	—	—	—	4	12	168	42	34	1	34	23
Man........	35	—	—	—	—	—	19	1	—	—	9	6
Sask.......	25	—	—	—	—	—	3	3	2	—	8	9
Alta........	128	1	—	—	—	—	45	11	10	1	30	30
B.C........	232	—	1	6	—	9	92	13	9	5	43	54
Supreme Court of Canada...	13	—	—	—	—	—	6	3	4	—	—	—
Totals....	**847**	**6**	**1**	**9**	**4**	**21**	**385**	**87**	**65**	**7**	**131**	**131**

Province	Summary Conviction Cases									
	Appeals Disposed of by Courts	Appeal of Informant				Appeal of Accused				
		From Acquittal		From Sentence		From Conviction			From Sentence	
		Dismissed	Conviction	Dismissed	Varied	Dismissed	Acquitted	Substituted Verdict	Dismissed	Varied
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N'f'ld...........	—	—	—	—	—	—	—	—	—	—
P.E.I............	—	—	—	—	—	—	—	—	—	—
N.S.............	83	12	7	1	1	44	13	4	1	—
N.B.............	12	2	—	—	—	4	2	—	4	—
Que.............	34	—	—	1	—	19	12	2	—	—
Ont.............	305	5	6	1	3	152	96	4	22	16
Man.............	21	—	2	—	—	10	9	—	—	—
Sask............	23	1	—	—	—	12	8	—	—	2
Alta.............	76	3	2	2	—	18	27	9	5	10
B.C.............	113	5	6	—	—	46	36	16	1	3
Totals.......	**667**	**28**	**23**	**5**	**4**	**305**	**203**	**35**	**33**	**31**

Section 3.—Juvenile Delinquents

The Juvenile Delinquents Act defines a child as "any boy or girl apparently or actually under the age of 16 years". Provision is made, however, by which the Governor General in Council may proclaim that in a province the definition of a child be a "person under the age of 18 years". This has been done in British Columbia, Manitoba and Quebec. In Alberta the age of juvenile boys is "under 16 years".

Newfoundland considers a juvenile to be a girl or a boy of under 17 years of age. For uniformity, the figures relating to juveniles compiled by the Dominion Bureau of Statistics refer to the younger ages of under 16 years only and deal primarily with cases disposed of by the courts.

The fact that juvenile court statistics furnish the most comprehensive figures collected on a country-wide basis makes it important that their possibilities and limitations be understood. This Section gives an account of juvenile delinquency in Canada from the viewpoint of legal action taken, for in the eyes of the law a *child is a delinquent only when he or she is adjudged before the court to have committed a delinquency.* To many people the term 'juvenile delinquent' has a broader interpretation but that adopted in this Section does not include those boys and girls whose misdemeanours have not been reported to the courts or who have been given the necessary advice and aid from their parents, their school, the police or a child-care agency. Moreover, it does not include those cases that are handled unofficially by the court, where the judge or probation officer makes an adjustment without filing a legal record of the offence. The tendency to follow this practice and thus keep children's names from court records is growing and may account to some extent for the decreasing number of recorded court cases.

These statistics represent cases of delinquency reported to the courts, from the most trivial infractions to the most serious, that of murder. The number of cases brought before the courts is influenced by such factors as personnel and facilities of the court, community interest in and understanding of the function of a juvenile court, and by variations in the policies of the courts in the disposition of cases. As more courts are established, the additional returns may exaggerate an apparent increase in delinquency or may underestimate a decrease. In some communities, the juvenile court is the only available agency to provide services to children; in others, there are well-established agencies serving children, of which the juvenile court is only one.

It should be noted, too, that the total figures do not represent the actual number of children charged and found guilty, but rather tend to exaggerate them, for a child referred to the court two or more times during the year for different offences is counted as a different case each time. Neither do the figures represent the number of offences committed by offenders, as, when a child is charged with more than one delinquency at a hearing, only the most serious offence is counted.

Reports of juvenile delinquents were received in 1952 from 151 of the 156 judicial districts. Eighteen of these had no cases to report. Separate reports were received in 1952 from 155 incorporated urban centres of 4,000 population or more.

Juveniles Before the Courts.—The number of cases of juveniles brought before the courts has declined almost steadily each year since 1943. The only break in the trend was in 1950 and 1951. In the latter year a large part of the increase was accounted for by the addition of 194 cases in Newfoundland.

22.—Juveniles brought before the Courts, by Province, 1948-52

NOTE.—Statistics for years before 1950 are for the 12 months ended Sept. 30; figures for 1950-52 are for the calendar year. Statistics for the three intervening months, October-December 1949, are given in DBS report *Juvenile Delinquents, 1950.* Figures for Newfoundland are included for the first time in 1951.

Province or Territory	1948	1949	1950	1951	1952	Percentage Change, 1951-52
	No.	No.	No.	No.	No.	
Newfoundland	...	..	..	194	223	+15·0
Prince Edward Island	28	49	10	55	29	−47·3
Nova Scotia	518	485	411	554	425	−23·3
New Brunswick	277	218	281	275	274	− 0·4
Quebec	1,889	1,490	1,555	1,348	965	−28·4
Ontario	3,256	2,983	3,550	3,441	3,370	− 2·1
Manitoba	422	490	417	404	454	+12·4
Saskatchewan	193	178	80	71	84	+18·3
Alberta	269	292	272	285	368	+29·1
British Columbia	1,015	852	722	893	1,021	+14·3
Yukon Territory	3	1	5	1	—	—
Northwest Territories	8	—	1	—	—	—
Canada	**7,878**	**7,038**	**7,304**	**7,521**	**7,213**	**− 4·1**

23.—Percentage Change in the Number of Boys and Girls brought before the Courts, 1943-52

NOTE.—*See* headnote to Table 22.

Year	Percentage Change from Preceding Year			Percentage Change from 1942		
	Boys' Cases	Girls' Cases	All Cases	Boys' Cases	Girls' Cases	All Cases
1943	−12·9	+ 1·1	−11·4	−12·9	+ 6·1	−11·4
1944	− 4·8	−10·5	− 5·5	−17·1	− 9·5	−16·3
1945	−16·3	− 9·6	−15·6	−30·6	−18·2	−29·3
1946	−11·4	− 5·8	−10·8	−38·5	−22·9	−36·9
1947	− 3·3	−17·3	− 5·1	−40·6	−36·2	−40·1
1948	− 5·1	− 1·3	− 4·7	−43·6	−37·1	−42·9
1949	− 9·0	−24·0	−10·7	−48·7	−52·2	−49·0
1950	+ 2·9	+11·8	+ 3·8	−47·2	−46·5	−47·1
1951	+ 3·9	− 5·3	+ 3·0	−45·1	−49·4	−45·5
1952	− 5·0	+ 4·5	− 4·1	−47·8	−47·1	−47·7

Children Adjudged Delinquent.—Between 80 and 90 p.c. of the children brought before the courts each year from 1943 to 1952 were adjudged delinquent. As the number brought before the courts has declined steadily during the ten-year period, with the exception of the years 1950 and 1951, so the number of delinquents has followed a like trend. The major decreases in 1952 as compared with 1951 were shown in Quebec and Ontario.

24.—Juvenile Delinquents, by Province, 1943-52

NOTE.—*See* headnote to Table 22.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943......	...	89	488	429	3,196	4,178	438	421	447	610	—	10,296
1944......	...	109	475	474	2,259	4,428	416	422	565	769	—	9,917
1945......	...	115	493	338	2,387	3,531	342	334	531	838	—	8,909
1946......	...	55	384	382	2,155	3,104	298	195	405	878	—	7,856
1947......	...	30	412	334	1,842	2,830	424	212	277	1,167	17	7,545
1948......	...	28	421	263	1,864	2,799	364	169	237	999	11	7,155
1949......	..	49	433	198	1,323	2,541	403	171	246	833	1	6,198
1950......	..	10	351	258	1,369	3,056	400	76	204	688	6	6,418
1951......	175	52	483	261	1,180	3,024	347	64	242	815	1	6,644
1952......	215	29	356	267	628	2,889	409	81	317	877	—	6,068

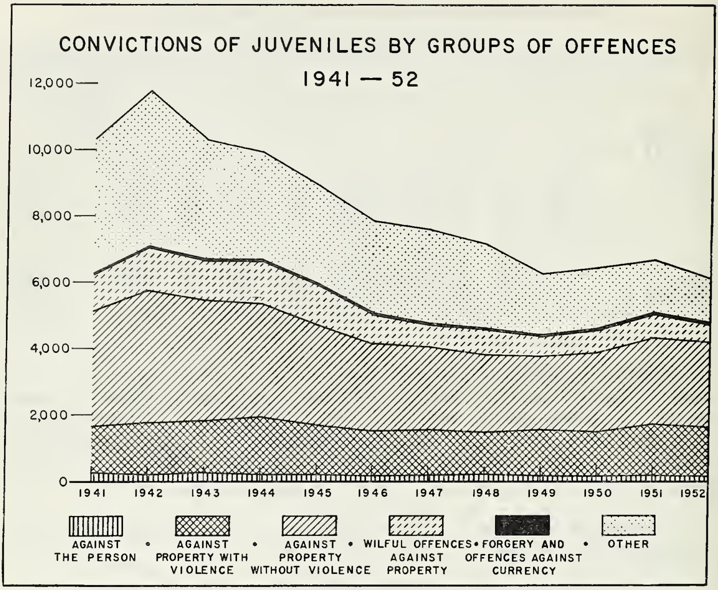
Offences.—Thieving is the most prevalent delinquency among boys and, together with receiving stolen goods, was the reason for court appearance in nearly half (48·5 p.c.) of the cases in 1952. Burglaries, robberies, house- and shop-breaking were committed by 26·4 p.c. of them and another 11·3 p.c. committed wilful acts against property. Only 3·0 p.c. of the boys were guilty of offences against the person and 36·2 p.c. of these were charged with common assault.

Incorrigibility (26·0 p.c.) and thefts (25·5 p.c.) were the complaints against more than half of the delinquent girls in 1952.

25.—Juvenile Delinquents, by Group of Offence and Ratio per 100,000 Population 7-16 Years of Age, 1943-52

NOTE.—*See* headnote to Table 22.

Year	Offences against the Person		Offences against Property with Violence		Offences against Property without Violence		Wilful Offences against Property		Forgery and Offences against Currency		Other Offences		Total Convictions	
	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population	No.	Ratio to Population
1943.......	260	14	1,550	81	3,658	190	1,140	59	21	1	3,667	190	10,296	535
1944.......	216	11	1,739	91	3,393	178	1,269	67	22	1	3,278	172	9,917	520
1945.......	220	12	1,513	80	2,964	157	1,190	63	29	2	2,993	159	8,909	473
1946.......	173	9	1,353	71	2,594	137	887	47	23	1	2,826	149	7,856	414
1947.......	189	10	1,389	72	2,449	127	677	35	23	1	2,818	147	7,545	392
1948.......	204	10	1,229	64	2,400	124	729	38	15	1	2,578	134	7,155	371
1949.......	176	9	1,346	67	2,244	113	600	30	15	1	1,817	91	6,198	311
1950.......	151	7	1,337	65	2,394	116	667	32	16	1	1,853	90	6,418	311
1951.......	188	9	1,542	72	2,563	119	765	36	20	1	1,566	73	6,644	310
1952.......	172	8	1,456	65	2,496	112	633	28	25	1	1,286	58	6,068	272



26.—Juvenile Delinquents, classified by Offence, 1948-52

NOTE.—*See* headnote to Table 22, p. 314.

Offence	1948	1949	1950	1951	1952
	No.	No.	No.	No.	No.
Manslaughter and murder	1	4	—	—	—
Rape, carnal knowledge and incest	3	7	4	3	3
Indecent assault	44	37	36	31	19
Aggravated assault and wounding	34	12	26	31	27
Common assault	95	81	59	89	65
Endangering life on railway	8	11	12	9	25
Other offences against the person	17	23	14	25	33
Burglary, breaking and entering	1,216	1,318	1,310	1,520	1,411
Robbery	13	28	27	22	45
Theft and receiving stolen goods	2,388	2,227	2,373	2,553	2,379
Embezzlement, false pretences and fraud	12	17	21	10	16
Arson	22	16	49	28	36
Wilful damage to property	618	536	618	646	597
Forgery and offences against currency	15	15	16	20	25
Incorrigibility and vagrancy	737	515	660	484	403
Immorality	63	97	126	111	110
Various other offences	1,869	1,254	1,067	1,062	874
Totals	**7,155**	**6,198**	**6,418**	**6,644**	**6,068**

Sex and Age.—Juvenile delinquents are predominantly boys. The ratio between boys and girls has remained much the same over a long period and for all offences in 1952 it was approximately one girl to eight boys. Juveniles of 13 to 15 years of age comprised the majority of delinquents, 68·9 p.c. in the case of boys and 85·1 p.c. in the case of girls. However, 299 boys and 14 girls (5·2 p.c. of the children) were under 10 years of age. There were no delinquent girls before the courts in Prince Edward Island; none under 14 years was judged to be delinquent in Saskatchewan and none under 11 years in Quebec and Manitoba.

27.—Percentages of Delinquent Boys and Girls, by Age Group, 1951 and 1952

NOTE.—*See* headnote to Table 22, p. 314.

Age Group	1951			1952		
	Boys	Girls	Both Sexes	Boys	Girls	Both Sexes
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
7-12 years	29·0	13·2	27·6	29·7	14·0	28·0
13-15 years	70·2	86·5	71·7	68·9	85·1	70·7
Not given	0·8	0·3	0·7	1·4	0·9	1·3
Totals	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

Education and Employment.—Many causes contribute to backwardness in school work. The retarding influence may be illness, over-crowding in the home, disturbed family situations or dull mentality. Presuming that six years is the usual age for entering Grade I, nearly half of the juvenile delinquents (44·9 p.c. of the boys and 44·8 p.c. of the girls) in 1952 were reported to be two or more years below the normal grade for their age and 3·8 p.c. of the boys and girls were a year or more above it.

Well over half of the boys had attained Grade VI and more than half of the girls Grade VII at the time of the delinquency. The majority of boys who had left school had reached Grades VI to VIII and the girls, Grades VII to IX. Some high school education had been achieved by 17 p.c. of the boys and girls.

28.—Age, Sex and School Grade of Delinquent Boys and Girls, 1952

(B=Boys; G=Girls)

Age	School Grades																Total Delinquents	
	Elementary										Secondary		Auxiliary		Not Given			
	I-IV		V		VI		VII		VIII									
	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G	B	G
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
7 years	17	1	—	—	—	—	—	—	—	—	—	—	1	—	3	—	21	1
8 "	80	7	1	—	—	—	1	—	—	—	—	—	2	—	5	—	89	7
9 "	163	3	17	1	—	1	—	—	—	—	—	—	4	—	5	1	189	6
10 "	179	5	70	9	23	—	1	—	1	—	—	—	5	—	9	1	288	15
11 "	160	8	130	6	96	3	18	1	5	—	—	—	7	—	13	3	429	21
12 "	108	7	147	14	165	12	104	4	28	3	2	—	14	—	25	1	593	41
13 "	76	8	112	14	214	15	218	29	182	21	35	2	24	2	46	3	907	94
14 "	54	4	79	13	185	11	287	37	303	59	252	48	29	10	53	8	1,242	190
15 "	44	8	90	12	110	25	253	40	379	67	585	91	34	11	89	15	1,584	269
Not given	7	1	4	—	1	—	4	—	6	2	13	1	—	—	41	2	76	6
Totals	888	**52**	**650**	**69**	**794**	**67**	**886**	**111**	**904**	**152**	**887**	**142**	**120**	**23**	**289**	**34**	**5,418**	**650**

In 1952, 10·4 p.c. of the delinquent boys and 18·5 p.c. of the delinquent girls were not attending school. At the time of leaving school their ages ranged from 7 to 15 years, the majority being between 14 and 15. Nearly 28 p.c. of the delinquent boys were unemployed. The largest group of wage-earners (67) were recorded as day labourers. The next largest group (52) were in occupations concerned with transportation, such as messengers, helpers on milk-delivery routes, truck drivers' assistants, etc. More than a third of the girls were idle after leaving school. Factory work, domestic and personal service were the main occupations of those who were employed.

Birthplaces of Juvenile Delinquents and their Parents.—Canada was the country of birth of 96·2 p.c. of the juvenile delinquents in 1952 (the place of birth was not recorded in 1·6 p.c. of the cases). One hundred and thirty-one (2·2 p.c.) were born in the British Isles, Europe, the United States and China. Ontario was the province of residence of 64·1 p.c. of those born outside Canada.

Both parents of 72·1 p.c. of the delinquent children in 1952 were born in Canada and another 13·9 p.c. had one parent born in this country. To evaluate these figures, comparison should be made of population ratio of children from 7-15 years of age whose parents were Canadian-born with those whose parents were born elsewhere.

Home Circumstances.—The type of home in which he lives and the amount and quality of supervision he receives are important factors in a child's behaviour. The statistics of the marital status of the parents and the place and type of residence of the child reflect home conditions and are worth recording as possible reasons for social or emotional maladjustment. The parents of 77·4 p.c. of the delinquent children were reported to be living together in 1952. Homes broken by separated parents, divorce or death was the background from which 19·0 p.c. of these boys and girls came. The mothers of 9·9 p.c. of the juvenile delinquents were employed other than in the home and, in the cases of another 2·9 p.c., the mothers were dead. The fathers of 6·0 p.c. of the cases were deceased. For every four juveniles who appeared in court, three resided in an urban centre and one in a rural district. Of these boys and girls, 89 p.c. were living in their own homes at the time they got into difficulties; 4·7 p.c. of them were in foster homes, either with a relative or some other person, and institutions were the homes of 1·7 p.c. of them.

Sources of Complaint.—The police were the complainants in the majority of juvenile cases, 79 p.c. of the boys having been so charged. Probation officers and parents were each responsible for 2·3 p.c. of those charged. School authorities referred 1·9 p.c. of the boys to the courts, and social agencies another 1·0 p.c.

The proportion (52·1 p.c.) of girls charged by the police was considerably less than the proportion of boys. Parents made more use of the courts for girls than for boys (16·4 p.c.). School authorities laid complaints in 5·7 p.c., probation officers in 6·6 p.c. and social agencies in 7·5 p.c. of the girls' cases.

Repeaters.—In 1952, approximately one in every three children brought before the courts failed to heed the first warning and made at least a second appearance. In 1952, 72·7 p.c. of the delinquent children appeared before the courts for the first time, 15·9 p.c. were second offenders, 6·0 p.c. third, while 5·4 p.c. were dealt with by the courts four or more times.

29.—First Offenders and Repeaters of Major Offences, 1943-52

NOTE.—*See* headnote to Table 22, p. 314.

Year	Total Delinquents	First Offenders	Repeaters					
			Second	Third	Fourth	Fifth or More	Total	Percentage of Total Delinquents
	No.	No.	No.	No.	No.	No.	No.	
1943	6,494	4,831	865	386	183	229	1,663	25·6
1944	6,529	4,665	943	429	221	271	1,864	28·6
1945	5,758	4,231	812	337	137	241	1,527	26·5
1946	4,949	3,430	799	344	155	221	1,519	30·7
1947	4,683	3,376	673	329	138	167	1,307	27·9
1948	4,591	3,340	674	266	147	164	1,251	27·3
1949[1]	6,198	5,195	603	208	109	83	1,003	16·2
1950[1]	6,418	5,039	892	314	140	33	1,379	21·5
1951[1]	6,644	5,141	909	324	132	138	1,503	22·6
1952[1]	6,068	4,412	963	367	155	171	1,656	27·3

[1] Includes minor offences.

Disposition of Cases.—In 1952, not quite one-half of the children's cases (48·2 p.c.) were heard within four days of the charge and slightly over two-thirds (68·6 p.c.) within nine days. However, 19·1 p.c. of them had to wait at least two weeks and 8·5 p.c. waited a month or more before the first hearing. These waiting periods may be explained in various ways.

Some county courts sit only twice or even once a month. Hearings may be deferred because of sickness in the family, school examinations, stormy weather, or long distances. The chief cause for delay, however, is the time it takes to investigate the facts properly. The probation officer, and frequently there is only one to a court, has to find out what occurred at the time of the delinquency; he must contact the parents and the school, learn something of the home situation, perhaps arrange medical or psychiatric examinations and explore community resources. The disadvantage of a long waiting period is outweighed by the assistance the court receives in deciding the form of treatment best suited to the child's needs and the type of care that will be the most economical for the community. For these intervening days or weeks most children are left in their own homes while a minority are placed in detention homes and, in the long run, whether the effect of the waiting period is good or bad is determined by the care given the youngster during that time.

Juvenile court judges heard 93·1 p.c. and magistrates 6·8 p.c. of the juvenile cases before the courts. The balance were heard by justices of the peace. The proportion of those declared delinquent (97·6 p.c.) in the magistrate's courts was greater than in the juvenile courts (83·2 p.c.). In the former court 2·4 p.c. of the cases were dismissed while in the juvenile courts only 2·5 p.c. were dismissed but 14·3 p.c. were adjourned *sine die.*

Some courts consider children whose hearings are adjourned *sine die* as delinquent while others do not but, for the sake of uniformity in this report, the latter point of view is maintained by the Dominion Bureau of Statistics. In assessing the total problem of juvenile delinquency, however, cases adjourned *sine die* have to be taken into account for, when the proportion of cases dealt with in this way increases, the proportion of those declared delinquent declines.

30.—Juveniles before the Courts, Dismissed and Delinquent, 1948-52

NOTE.—*See* headnote to Table 22, p. 314.

Item	1948		1949		1950		1951		1952	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
Before the courts	7,878	100·0	7,038	100·0	7,304	100·0	7,521	100·0	7,211	100·0
Dismissed	190	2·4	166	2·4	197	2·7	195	2·6	176	2·5
Adjourned *sine die*	533	6·8	674	9·6	689	9·4	682	9·1	967	13·4
Delinquent	7,155	90·8	6,198	88·0	6,418	87·9	6,644	88·3	6,068	84·1

The disposition of cases in 1952 differed between boys and girls. The proportion of those put on probation was 41·9 p.c. for the boys and 44·5 p.c. for the girls. Fines or restitution were meted out to 18·1 p.c. of the boys but to only 5·5 p.c. of the girls. This is because damage to property, for which restitution seems a reasonable adjustment, is committed relatively more often by boys than by girls. A much larger proportion of girls (38·3 p.c.) than boys (16·6 p.c.) were sent to training schools. Final disposition of case was postponed in 7·2 p.c. of the girls' cases while 19·3 p.c. of the boys were given suspended sentences. Corporal punishment was resorted to in only two cases.

31.—Disposition of Delinquents, by Type of Sentence, 1943-52

NOTE.—*See* headnote to Table 22, p. 314.

Year	Reprimanded		Probation of Court		Protection of Parents		Fined or Made Restitution		Detained Indefinitely		Sent to Training School		Final Disposition Suspended		Corporal Punishment	
	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.	No.	p.c.
1943	464	4·5	2,854	27·7	140	1·4	1,962	19·0	101	1·0	1,401	13·6	3,322	32·3	52	0·5
1944	395	4·0	2,780	28·0	112	1·1	2,547	25·7	92	1·0	1,376	13·9	2,551	25·7	64	0·6
1945	352	3·9	2,698	30·3	109	1·2	2,367	26·6	65	0·7	1,348	15·1	1,947	21·9	23	0·3
1946	233	3·0	2,291	29·2	67	0·8	1,854	23·6	53	0·7	1,180	15·0	2,150	27·4	28	0·3
1947	182	2·4	2,273	30·1	69	0·9	2,116	28·1	40	0·5	1,108	14·7	1,733	23·0	24	0·3
1948	248	3·4	2,201	30·8	55	0·8	1,850	25·8	47	0·7	1,120	15·6	1,622	22·7	12	0·2
1949	196	3·2	2,141	34·5	98	1·6	1,655	26·7	39	0·6	1,036	16·7	1,029	16·6	4	0·1
1950	354	5·5	2,392	37·3	94	1·4	1,148	17·9	26	0·4	1,144	17·8	1,257	19·6	3	0·1
1951	309	4·6	2,313	34·8	154	2·3	1,433	21·6	45	0·7	1,141	17·2	1,247	18·7	2	0·1
1952	243	4·0	2,412	39·8	148	2·4	1,015	16·7	1	--	1,152	19·0	1,095	18·1	2	--

Section 4.—Police Forces

The Police Forces operating in Canada are organized under three groups: (1) the Federal Force, which is the Royal Canadian Mounted Police whose operations cover a very wide field in addition to purely police work; (2) Provincial Police Forces—the Provinces of Ontario and Quebec have organized their own Provincial Forces, but the other provinces engage the services of the Royal Canadian Mounted Police to perform parallel functions within their boundaries; (3) Municipal Police—every city of reasonable size has its own police organization which is paid for by the local taxpayers and which attends to police matters within the borders of the municipality concerned.

Subsection 1.—The Royal Canadian Mounted Police*

The Royal Canadian Mounted Police is a Civil Force maintained by the Federal Government. Organized in 1873 as the North West Mounted Police, its duties were confined to what was then known as the North West Territories. By 1904, the work of the Force received signal recognition when the prefix "Royal" was bestowed upon it by King Edward VII. In 1905, when Alberta and Saskatchewan were constituted Provinces, an arrangement was made whereby the Force continued to discharge its duties as formerly, each Province making a contribution towards defraying the cost. This arrangement was continued until 1917.

In 1918, the Royal North West Mounted Police was assigned the duty of enforcing Dominion legislation for the whole of Canada west of Port Arthur and Fort William. Soon after the end of World War I an extension of governmental activities made it obvious that the enforcement of Dominion statutes throughout Canada must be the responsibility of a Dominion Force and, therefore, the jurisdiction of the Royal North West Mounted Police was extended to the whole of Canada early in 1920. In that year, the name of the Force was changed to the Royal Canadian Mounted Police and the former Dominion Police with Headquarters at Ottawa, whose duties were largely connected with guarding public buildings in that city and Canadian Government dockyards at Halifax, N.S., and Esquimalt, B.C., was absorbed by the Royal Canadian Mounted Police.

Organization.—The Force is controlled and administered by a Minister of the Crown (the Minister of Justice). Its Commissioner has the rank and status of a Deputy Minister. Officers are commissioned by the Crown and are selected from serving non-commissioned officers. The Force is divided into 17 Divisions, including the Marine Division with Headquarters at Halifax, N.S. There are 627 detachments distributed over the entire country. Its land force transportation consists of 1,293 motor-vehicles, most of which are fitted with two-way radio sets connecting with wireless stations operated by the Force. Such stations operate in both Western and Eastern Canada, including the Quebec-United States boundary area. The "Air" Division of the Force operates ten aircraft of various types. The strength of the Force is approximately 4,445 officers and men, with a reserve strength of about 291. The reserve strength is located chiefly in the larger cities where men can be congregated easily and where instruction can be given in the evenings.

The Marine Division has a strength of about 200 officers and men and operates 26 ships of various kinds, the majority of which are located on the Atlantic and Pacific Coasts and on the Great Lakes. The RCMP schooner *St. Roch,* which has been used as a floating detachment in the Far North and as a supply ship to isolated detachments, was the first ship to navigate the Northwest Passage from east to west and from west to east and is also the first vessel to have circumnavigated the North American Continent.

The Personnel Branch of the RCMP has officers in each Division across the country. Great care is taken in the selection of recruits.

Duties.—The Royal Canadian Mounted Police is responsible for enforcing federal laws throughout Canada and is specially empowered to deal with infractions against smuggling by sea, land and air. It also enforces the provisions of the Excise Act, and is responsible for the suppression of traffic in narcotic drugs. In all, the

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* Revised by Commissioner L. H. Nicholson, M.B.E., Royal Canadian Mounted Police, Ottawa.

Force has responsibility in over 50 Federal Government Acts, including the Indian Act. It also assists many departments of the Federal Government in administrative duties and is responsible for the protection of government buildings and property. It is the sole police force operating in the Northwest and Yukon Territories. Furthermore, it undertakes secret and security services for the Federal Government. In addition to its federal duties, agreements have been made with the Provinces of Alberta, Saskatchewan, Manitoba, Nova Scotia, New Brunswick, Prince Edward Island, Newfoundland and British Columbia whereby the services of the Royal Canadian Mounted Police can be secured to enforce provincial laws and the Criminal Code in rural districts upon payment for such services. The agreement with Saskatchewan has been in existence for 26 years and those with the Provinces of Alberta, Manitoba, New Brunswick, Nova Scotia and Prince Edward Island for 22 years. The agreements were entered into with the Provinces of Newfoundland and British Columbia in August 1950, and the police forces of those Provinces were absorbed by the Royal Canadian Mounted Police. The Force has agreements also for policing more than 123 urban centres within the provinces mentioned.

Other Services.—The services of RCMP experts in fingerprints, crime-index information, examination of firearms and questioned documents are available to all other police forces in Canada. A *Police Gazette,* issued monthly and containing instructional articles on police work as well as the latest information on wanted or missing persons, is sent to all police forces across the country. The RCMP has two Police Colleges that are open to selected personnel from other police forces in Canada and to a more limited number of those outside its boundaries.

In recent years the Force has given special attention to crime prevention, as well as detection, and has done much to assist young people in those provinces where the Force acts as the provincial police in developing a healthy outlook towards the police, law, order and responsible citizenship.

A book entitled *Law and Order in Canadian Democracy,* containing twenty essays, has been issued by the Force and is available through the Queen's Printer, Ottawa.

Subsection 2.—Provincial Police Forces*

Quebec Provincial Police Force.—The Quebec Provincial Police Force is responsible for upholding law and order over the whole territory of the Province, from the provincial boundary between Ontario and Quebec to the Magdalen Islands in the Gulf of St. Lawrence. The Force, composed of about 800 men, is in charge of a Director, who acts under direct orders from and is responsible to the Attorney-General of the Province.

To facilitate operations, the territory is divided into two almost equal parts designated as the District of Montreal and the District of Quebec. The Director has his office at Montreal and an Assistant Director at the city of Quebec. Working under these Directors are two Deputies and an Inspector General. In each District the Police Force is divided into three sections: the detective corps, the constabulary and the traffic officers; each section is in charge of a captain supported by a number of lieutenants and sergeants.

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* Revised by Geo. A. Shea, O.B.E., Secretary-Treasurer, Chief Constables' Association of Canada, Montreal, Que.

A province-wide frequency modulation radio-communication system has been established at Montreal. A main station, operating on the top of Mount Royal, directs radio-equipped cars within a radius of between 60 and 80 miles around Montreal, and similar stations operating from the cities of Quebec and Three Rivers direct the mobile units operating in their respective areas. Substations operate at each of the eight bridges giving access to or exit from the city of Montreal and a number of cars, all equipped with frequency modulation three-way radio units, patrol the surrounding country day and night.

Ontario Provincial Police.—The Ontario Provincial Police is maintained by the Ontario Government under the Attorney-General's Department. The Force is responsible for law enforcement in the rural and unorganized parts of the Province and in certain municipalities by contract.

The development of the Force from its beginning in the early years of Confederation to the passing of the Police Act in 1946, is outlined in the 1950 Year Book, pp. 332-333.

The Force, with a strength of approximately 1,453 in 1953, consists of a General Headquarters at Toronto and 16 districts with Headquarters at Chatham, London, Dundas, Niagara Falls, Newmarket, Mount Forest, Barrie, Peterborough, Belleville, Perth, Cornwall, Haileybury, Sudbury, Timmins, Port Arthur and Kenora. Each district has detachments adequate to meet law enforcement requirements. A Criminal Investigation Branch, under the command of a Chief Inspector, is maintained at Toronto to handle crimes of a major nature.

The installation of one of the largest police frequency-modulation radio systems in the world has placed at the command of the police a most efficient method of combating every type of lawlessness. There are in operation 56 fixed stations, together with 437 two-way radio cruisers and three cabin cruisers, one on Lake Temagami, one on Lake Simcoe and one on Georgian Bay. The 250-watt station at each District Headquarters is open 24 hours daily and many of the cars are on continuous round-the-clock patrols.

Up to December 1953, 90 municipalities had availed themselves of the provisions of the Police Act for the policing of their municipalities by the Ontario Provincial Police.

Subsection 3.—Municipal Police Statistics

Police statistics were submitted for the year 1952 by Chiefs of Police in 243 urban centres, 13 district communities, 13 townships and one unorganized district, all of 4,000 population or over.

Criminologists generally agree that the number of offences known to the police is the closest indication of the volume and nature of crime in a country. The number of offences reported as known to the police was 24·5 p.c. higher in 1952 than in the previous year. Of these known offences, 51·9 p.c. were cleared by arrest.

Of the total prosecutions, 5·9 p.c. were for crimes under the Criminal Code and federal statutes, 21·1 p.c. were for offences under provincial statutes; and 73 p.c. were for municipal by-law infractions. Traffic offences accounted for 87·8 p.c. of the prosecutions.

32.—Summary Police Statistics, by Incorporated Centres of 10,000 Population or Over, and Totals for Incorporated Centres of 4,000-10,000 Population, 1952

Province and Urban Centre	Population 1951	Police on Force	Offences Known to the Police	Prosecutions	Arrests	Summonses
	No.	No.	No.	No.	No.	No.
Newfoundland—						
St. John's	52,873	136	2,158	7,701	1,204	954
Totals, 10,000 Population or Over	**52,873**	**136**	**2,158**	**7,701**	**1,204**	**954**
Totals, 4,000-10,000 Population	**13,291**	**18**	**1,860**	**1,552**	**299**	**1,318**
Prince Edward Island—						
Charlottetown	15,887	15	1,104	988	900	129
Totals, 10,000 Population or Over	**15,887**	**15**	**1,104**	**988**	**900**	**129**
Totals, 4,000-10,000 Population	**6,547**	**6**	**514**	**481**	**408**	**70**
Nova Scotia—						
Dartmouth	15,037	15	1,098	564	218	609
Glace Bay	25,586	21	1,062	880	730	228
Halifax	85,589	138	5,147	19,338	3,279	893
New Waterford	10,423	7	370	523	296	99
Sydney	31,317	39	3,224	2,970	2,146	184
Truro	10,756	8	180	173	553	131
Totals, 10,000 Population or Over	**178,708**	**228**	**11,081**	**24,448**	**7,222**	**2,144**
Totals, 4,000-10,000 Population	**69,186**	**40**	**4,677**	**3,011**	**2,064**	**1,023**
New Brunswick—						
Edmundston	10,753	12	215	308	128	50
Fredericton	16,018	26	1,214	639	807	313
Moncton	27,334	44	2,364	2,357	1,272	433
Saint John	50,779	79	11,191	10,169	2,563	12,279
Totals, 10,000 Population or Over	**104,884**	**162**	**14,984**	**13,473**	**4,770**	**13,075**
Totals, 4,000-10,000 Population	**30,613**	**27**	**3,173**	**2,818**	**1,933**	**1,204**
Quebec—						
Arvida	11,078	17	293	176	32	185
Cap de la Madeleine	18,667	24	1,328	770	770	24
Chicoutimi	23,216	22	1,227	1,536	1,147	1,147
Drummondville	14,341	17	511	1,366	373	74
Granby	21,989	20	366	180	80	92
Grand'Mère	11,089	[1]	[1]	[1]	[1]	[1]
Hull	43,483	46	10,544	9,419	1,354	7,987
Jacques-Cartier	22,450	13	1,844	1,335	129	129
Joliette	16,064	24	609	551	71	33
Jonquière	21,618	19	3,375	917	410	—
Lachine	27,773	25	419	1,266	245	195
Lasalle	11,633	15	224	182	33	16
Lévis	13,162	16	224	1,472	219	20
Longueuil	11,103	14	1,008	629	115	800
Magog	12,423	11	618	588	[1]	621
Montreal	1,021,520	2,092	311,345	283,825	20,444	294,381
Montreal North	14,081	20	3,101	2,995	[1]	—
Mount Royal	11,352	25	4,115	3,969	8	3,960
Outremont	30,057	44	9,767	9,571	254	211
Quebec	164,016	285	25,060	40,190	3,259	—
Rimouski	11,565	7	861	830	56	760
Rouyn	14,633	12	726	1,727	260	23
St. Hyacinthe	20,236	26	1,566	1,487	255	92
St. Jean	19,305	19	185	17	17	—
St. Jérôme (Terrebonne Co.)	17,685	17	340	331	324	324
St. Laurent	20,426	29	5,711	5,404	217	5,470
St. Michel (Montreal Is.)	10,539	14	2,370	353	45	2,070
Shawinigan Falls	26,903	39	1,570	1,528	168	203
Sherbrooke	50,543	71	5,878	5,677	605	4,870
Sillery	10,376	8	59	55	13	—

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[1] Not reported.

32.—Summary Police Statistics, by Incorporated Centres of 10,000 Population or Over, and Totals for Incorporated Centres of 4,000-10,000 Population, 1952—continued

Province and Urban Centre	Population 1951	Police on Force	Offences Known to the Police	Prose-cutions	Arrests	Sum-monses
	No.	No.	No.	No.	No.	No.
Quebec—concluded						
Sorel	14,961	18	479	396	54	54
Thetford Mines	15,095	19	3,780	1,192	190	219
Three Rivers	46,074	81	6,559	5,505	1,200	4,305
Valleyfield (Salaberry-de-)	22,414	31	2,404	2,333	56	179
Verdun	77,391	68	8,996	5,989	1,447	3,133
Victoriaville	13,124	11	3,004	2,911	215	1,230
Westmount	25,222	42	12,406	8,739	688	8,040
Totals, 10,000 Population or Over	**1,937,607**	**3,261**	**432,872**	**405,411**	**34,753**	**340,847**
Totals, 4,000-10,000 Population	**319,334**	**244**	**21,955**	**19,052**	**5,824**	**8,899**
Ontario—						
Barrie	12,514	12	2,052	732	377	324
Belleville	19,519	23	2,541	1,903	829	1,244
Brantford	36,727	39	1,183	3,271	724	450
Brockville	12,301	16	3,869	3,001	583	439
Chatham	21,218	34	2,779	2,444	529	1,949
Cornwall	16,899	20	1,247	1,063	339	571
Eastview	13,799	8	1,386	667	61	606
Forest Hill	15,305	30	432	2,302	71	3
Fort William	34,947	43	2,775	3,655	1,806	694
Galt	19,207	16	1,147	791	271	635
Guelph	27,386	30	4,325	4,187	835	3,655
Hamilton	208,321	318	102,801	103,137	6,343	52,560
Kingston	33,459	46	16,426	15,047	1,051	14,285
Kitchener	44,867	54	6,159	5,680	814	4,254
Leaside	16,233	15	362	6,448	61	—
London	95,343	134	15,471	12,978	2,138	10,803
Mimico	11,342	9	1,863	142	79	1,786
New Toronto	11,194	15	1,958	1,897	227	1,671
Niagara Falls	22,874	37	2,608	3,437	1,069	2,378
North Bay	17,944	17	2,915	2,354	1,023	1,253
Orillia	12,110	8	1,617	1,084	293	914
Oshawa	41,545	41	4,132	3,686	960	2,699
Ottawa	202,045	278	29,163	26,850	3,240	22,862
Owen Sound	16,423	18	1,518	1,151	375	—
Pembroke	12,704	11	1,532	1,887	997	220
Peterborough	38,272	38	5,481	4,531	861	3,661
Port Arthur	31,161	45	5,415	13,305	4,373	350
St. Catharines	37,984	51	14,068	3,624	1,055	2,593
St. Thomas	18,173	20	1,599	1,118	290	823
Sarnia	34,697	41	4,191	4,367	793	3,623
Sault Ste. Marie	32,452	38	2,563	2,277	1,447	2,071
Stratford	18,785	20	1,865	2,308	249	1,468
Sudbury	42,410	50	13,447	9,675	2,866	6,847
Timmins	27,743	26	3,579	2,980	1,206	1,689
Toronto	675,754	1,315	527,881	513,398	27,337	490,422
Trenton	10,085	14	1,647	1,570	319	1,248
Waterloo	11,991	11	2,199	2,211	130	2,067
Welland	15,382	22	3,422	3,202	345	2,877
Windsor	120,049	220	15,693	13,244	3,638	12,128
Woodstock	15,544	20	2,065	4,360	480	1,620
Totals, 10,000 Population or Over	**2,106,708**	**3,203**	**817,376**	**791,964**	**70,484**	**659,742**
Totals, 4,000-10,000 Population	**275,918**	**451**	**54,779**	**62,628**	**7,673**	**35,005**
Manitoba—						
Brandon	20,598	19	1,504	852	238	640
St. Boniface	26,342	19	2,962	2,120	248	2,735
Winnipeg	235,710	328	5,948	118,297	5,353	113,710
Totals, 10,000 Population or Over	**282,650**	**366**	**10,414**	**121,269**	**5,839**	**117,085**
Totals, 4,000-10,000 Population	**37,387**	**36**	**2,472**	**4,014**	**710**	**1,572**

32.—Summary Police Statistics, by Incorporated Centres of 10,000 Population or Over, and Totals for Incorporated Centres of 4,000-10,000 Population, 1952—concluded

Province and Urban Centre	Population 1951	Police on Force	Offences Known to the Police	Prose-cutions	Arrests	Sum-monses
	No.	No.	No.	No.	No.	No.
Saskatchewan—						
Moose Jaw	24,355	23	5,297	5,141	677	873
Prince Albert	17,149	17	1,809	2,265	748	446
Regina	71,319	72	6,224	17,757	1,827	3,621
Saskatoon	53,268	53	1,695	11,414	1,036	1,151
Totals, 10,000 Population or Over	**166,091**	**165**	**15,025**	**36,577**	**4,288**	**6,091**
Totals, 4,000-10,000 Population	**33,611**	**32**	**4,339**	**2,810**	**676**	**1,137**
Alberta—						
Calgary	129,060	180	17,549	14,495	4,882	9,260
Edmonton	159,631	186	20,014	10,705	5,121	5,584
Lethbridge	22,947	25	7,142	4,110	515	381
Medicine Hat	16,364	20	1,435	3,011	311	721
Totals, 10,000 Population or Over	**328,002**	**411**	**46,140**	**32,321**	**10,829**	**15,946**
Totals, 4,000-10,000 Population	**20,845**	**8**	**1,238**	**6,148**	**362**	**1,345**
British Columbia—						
New Westminster	28,639	37	10,734	8,263	943	476
North Vancouver	15,687	18	956	849	239	548
Penticton	10,548	9	1,300	1,137	216	1,264
Trail	11,430	12	1,956	1,693	155	1,421
Vancouver	344,833	637	29,704	100,677	14,897	3,904
Victoria	51,331	86	16,449	16,173	878	15,414
Totals, 10,000 Population or Over	**462,468**	**799**	**61,099**	**128,792**	**17,328**	**23,027**
Totals, 4,000-10,000 Population	**75,700**	**239**	**26,835**	**22,983**	**7,012**	**12,083**
Grand Totals, Incorporated Centres of 10,000 Population or Over	**5,624,789**	**8,746**	**1,412,253**	**1,563,574**	**157,607**	**1,178,740**
Grand Totals, Incorporated Centres of 4,000-10,000 Population	**882,432**	**1,101**	**121,842**	**125,497**	**26,961**	**63,656**

Section 5.—Penal Institutions and Training Schools

Penal institutions may be classified under three headings: (1) penitentiaries, where prisoners have long sentences and the turnover is slow; (2) reformatories, where the turnover is also rather slow; and (3) common gaols, where the turnover is extremely rapid.

If the average of the figures for inmates at the beginning and at the end of the year be considered the average population for the year, and the number of discharged as the turnover, the turnover in the years 1951 and 1952 was: in penitentiaries, 47 and 49 p.c.; in reformatories, 296 and 305 p.c.; and in gaols, no less than 1,549 and 1,589 p.c., respectively.

In considering these figures it should be borne in mind that the common gaol population changes from day to day and is made up partly of accused persons awaiting trial who may be either liberated or sent to a penitentiary or reformatory.

33.—Movement of Population in Penitentiaries, Reformatories and Gaols, 1949-52

Type of Institution and Item	1949	1950[1]	1951	1952[2]
	No.	No.	No.	No.
Penitentiaries—				
Inmates in custody at beginning of year	3,851	4,260	4,740	4,817
Admitted during the year	2,382	2,445	2,334	2,182
Discharged during the year	2,008	1,965	2,257	2,312
In custody at end of year	4,225	4,740	4,817	4,687
Reformatories for Men—				
Inmates in custody at beginning of year	2,939	2,556	2,728	2,622
Admitted during the year	12,199	7,937	7,794	8,613
Discharged during the year	11,989	7,765	7,953	8,407
In custody at end of year	3,149	2,728	2,569	2,828
Reformatories for Women—				
Inmates in custody at beginning of year	264	230	197	160
Admitted during the year	861	367	379	451
Discharged during the year	873	400	416	433
In custody at end of year	252	197	160	178
Common Gaols—				
Inmates in custody at beginning of year	4,530	5,625	6,102	5,445
Admitted during the year	77,729	85,062	88,555	87,917
Discharged during the year	77,295	84,697	89,235	87,763
In custody at end of year	4,964	5,990	5,422	5,599
Totals—				
Inmates in custody at beginning of year	**11,584**	**12,671**	**13,767**	**13,044**
Admitted during the year	**93,171**	**95,811**	**99,062**	**99,163**
Discharged during the year	**92,165**	**94,827**	**99,861**	**98,915**
In custody at end of year	**12,590**	**13,655**	**12,968**	**13,292**

[1] In 1950, Newfoundland Penitentiary reported for the first time and Oakalla Prison Farm, B.C., previously classed as a reformatory for men, was changed to a gaol.

[2] In 1952, the Bowden Institution, Innisfail, Alta., and Young Offenders' Unit, South Burnaby, B.C., reported for the first time.

Subsection 1.—Penitentiaries*

The Penitentiaries Branch of the Department of Justice is charged with the administration of the various penitentiaries of Canada. Eight institutions are included in the system, the two largest being at Kingston, Ont., and St. Vincent de Paul, Que. Others are at Dorchester, N.B., Prince Albert, Sask., Stony Mountain, Man., New Westminster, B.C., Collin's Bay, Ont., and St. John's, N'f'ld.; the latter is operated under provincial authority and the figures for inmates of that institution serving sentences of two years or more are included for 1950-53 in Tables **34** and **35**. A Federal Training Centre was opened at St. Vincent de Paul in April 1952 for the treatment and training of offenders under 25 years of age. A Penitentiary Staff College was also set up at Kingston for the training of penitentiary officers through courses of instruction and training conferences. During the year ended Mar. 31, 1953, the average daily population of the penitentiaries was 4,708 and the total net cash outlay for maintenance for the year was $7,364,148 or $4.28 per inmate per day.

Females given penitentiary sentences in the various provinces are sent to the Prison for Women at Kingston, Ont., where special quarters and staff are maintained for their detention and supervision; inmates in custody on Mar. 31, 1953, numbered 105.

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* Revised by the Commissioner of Penitentiaries, Department of Justice, Ottawa.

34.—Movement of Convicts in Penitentiaries, Years Ended Mar. 31, 1950-53

Item	1950	1951	1952	1953
	No.	No.	No.	No.
In Custody, Apr. 1	**4,260**	**4,740**	**4,817**	**4,686**[1]
Received—				
From gaols	2,017	1,981	1,847	2,136
By transfer	419	338	323	970
By cancellation of ticket-of-leave	9	15	12	13
Totals, Received	2,445	2,334	2,182	3,119
Discharged by—				
Expiry of sentence	1,142	1,391	1,554	1,463
Transfer	419	339	322	972
Ticket-of-leave	331	459	373	384
Deportation	—	—	—	5
Death	15	5	24	11
Pardon	40	49	25	21
Release to military authorities	—	—	1	—
Release on order of court	5	7	13	15
Return to provincial authorities	4	1	—	—
Instructions from Immigration Department	9	—	—	—
Sentence quashed	—	6	—	—
Totals, Discharged	1,965	2,257	2,312	2,871
In Custody, Mar. 31	**4,740**	**4,817**	**4,687**	**4,934**

[1] This figure shows one inmate fewer than at Mar. 31, 1952. Sentence of one inmate annulled by court order during year ended Mar. 31, 1952 but notification was not received by penitentiary until the following fiscal year.

35.—Summary Statistics *re* Convicts in Penitentiaries, as at Mar. 31, 1950-53

Item	1950	1951	1952	1953
	No.	No.	No.	No.
Place of Birth—				
Canada	4,264	4,358	4,272	4,554
British Isles and possessions	157	144	121	116
Austria and Hungary	21	22	20	14
Italy	11	9	9	9
Poland	42	34	33	38
U.S.S.R.	60	64	53	30
Other Europe	63	65	63	66
United States	110	110	95	91
Other countries	12	11	21	16
Marital Status—				
Single	2,863	2,937	2,776	2,955
Married	1,573	1,560	1,575	1,607
Widowed	130	135	133	132
Divorced	103	108	84	132
Separated	71	77	119	108
Sex—				
Male	4,650	4,713	4,562	4,829
Female	90	104	125	105
Age—				
Under 21 years	551	520	485	564
21 to 29 years	2,147	2,209	2,091	2,151
30 to 39 "	1,148	1,176	1,245	1,293
40 to 49 "	575	575	543	572
50 to 59 "	210	227	212	239
Over 60 "	109	110	111	115
Not stated	—	—	—	—
Totals	**4,740**	**4,817**	**4,687**	**4,934**

The Ticket-of-Leave System.—The parole system in Canada is legalized under the Ticket-of-Leave Act (R.S.C. 1952, c. 264) and is administered by the Minister of Justice. It is described in detail in the 1948-49 Year Book, pp. 305-308.

Subsection 2.—Reformatories and Other Corrective Institutions

A census of reformatories and of training schools is taken at five-year intervals, the latest being June 1, 1951. At that date, there were 13 reformative and corrective institutions, four of which were for women. Enumeration cards were completed for 2,551 men and 141 women on June 1, 1951. In these institutions for adults 29 p.c. of the inmates were under 21 years of age at the time of admission and almost 50 p.c. were between the ages of 21 and 39 years. The proportion of single men was 63 p.c. and three out of four of the men whose residence was known lived in urban centres. More than one-half of the women (53·2 p.c.) were single and the majority (91·0 p.c.) of those whose residence was known lived in urban centres. From five to eight years of elementary school education were recorded for about one-half of the male and female inmates. Only 6·7 p.c. of the men were unemployed at the time of admission. On the other hand, 20·6 p.c. of the women were unemployed and another 34·0 p.c. had never worked.

The revenue for the support of the institutions for men was derived chiefly from provincial funds (56·0 p.c.) and from the sale by the institutions of farm and industrial products (41·3 p.c.). In the case of the institutions for women, income was received from provincial funds (31·0 p.c.), municipalities (1·8 p.c.), sale of products (53·4 p.c.), donations and bequests (4·6 p.c.) and other sources (9·2 p.c.).

Summary statistics of inmates, movement of population, terms of sentence and penal record of inmates are given in the 1954 Canada Year Book, pp. 311-313.

Subsection 3.—Training Schools

Reports on movement of population are received yearly from training schools and figures compiled therefrom are shown in Table 36 for the years 1948 to 1952.

36.—Movement of Population in Training Schools, Years Ended Mar. 31, 1948-52

Item	1948	1949	1950	1951	1952[1]
	No.	No.	No.	No.	No.
Training Schools for Boys—					
Pupils in residence at beginning of year	1,308	1,365	1,614	1,662	1,668
Admitted during the year	1,391	1,189	1,220	1,393	1,597
Discharged during the year	1,334	1,158	1,172	1,402	1,463
In residence at end of year	1,365	1,396	1,662	1,653	1,802
Training Schools for Girls—					
Pupils in residence at beginning of year	491	516	680	695	674
Admitted during the year	431	595	493	473	608
Discharged during the year	406	559	478	494	529
In residence at end of year	516	552	695	674	753
Totals—					
Pupils in residence at beginning of year	**1,799**	**1,881**	**2,294**	**2,357**	**2,342**
Admitted during the year	**1,822**	**1,784**	**1,713**	**1,866**	**2,205**
Discharged during the year	**1,740**	**1,717**	**1,650**	**1,896**	**1,992**
In residence at end of year	**1,881**	**1,948**	**2,357**	**2,327**	**2,555**

[1] In 1952, Boscoville Training School for Boys, Rivière-des-Prairies, Que., reported for the first time.

The period of the financial year varied among the training schools. The last complete financial year before June 1, 1951, showed that the province concerned supplied about three-quarters of the funds for the support of such schools (77·2 p.c. for boys' schools and 70·6 p.c. for girls' schools) and the municipalities a little more than a tenth (12·5 p.c. for boys' schools, 10·2 p.c. for girls' schools). Other financial resources included fees paid by parents, donations, bequests, sale of farm and industrial products and laundry work. Nine of the schools for boys were provincially administered, five were administered by religious orders and one by a board of directors; eight of the schools for girls were administered by religious orders and four were under provincial authority.

Statistics of training schools compiled from Census of 1951 returns are summarized in the 1954 Canada Year Book, pp. 314-316.

CHAPTER VIII.—EDUCATION AND RESEARCH

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—FORMAL EDUCATION*

Section 1.—Education in the Provinces

Education in Canada is generally the responsibility of the provinces.† Each province has its own system, that of Quebec being a dual one. However, there are two clearly defined types: (1) the English tradition carried on in nine provinces and in the Protestant schools of Quebec and (2) the French tradition followed in the Roman Catholic schools of Quebec.

The English Tradition.—The system of education in each province is established by legislation and administered by a Department of the Provincial Government under a Minister of Education who is a member of the Cabinet and is responsible to the Legislature.

Each of the Atlantic Provinces has a Council of Public Instruction or Board of Education, an advisory group composed of the Premier, Minister of Education, Deputy Minister or Superintendent and certain other appointees. The Council in Newfoundland is made up of the Minister, the Deputy Minister and the Superintendent of Education of each of the four leading religious denominations.

Each Department of Education is concerned with the general administration of the public schools, the conduct of examinations, the certification of teachers, the registration of private schools and trade schools, public and travelling libraries, correspondence courses and also the direct management and control of teacher-training schools, vocational institutes and schools for the blind and the deaf.

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* Except where otherwise indicated, this Part has been prepared in the Education Division, Dominion Bureau of Statistics.

† The education of Indian children on reserves is under the jurisdiction of the Federal Government. *See* p. 158 and p. 335.

Direct control and operation of the public schools is in the hands of local boards of school trustees, usually elected for terms of two or three years. They employ the teachers and administer the revenues received from provincial grants, local taxation and other minor sources. Any fees charged are for secondary education and are merely nominal, except in Newfoundland where they take the place of taxation.

Larger units of administration exist in all provinces except in Newfoundland and for the Roman Catholic schools of Quebec, though in most provinces the local boards within the units remain with limited powers. In some provinces an official trustee (or trustees), often the school inspector, may be appointed to act in school sections where a board cannot be obtained. Table **1** gives figures of local administrative units.

1.—Active School Boards and Official Trustees, by Province, 1952

Province	Unit Boards	Local Boards within Units	Independent Local Boards	Total Boards	Official Trustees
	No.	No.	No.	No.	No.
Newfoundland	—	—	293	293	—
Prince Edward Island	2	—	476	478	—
Nova Scotia	24	1,740	48	1,812	3
New Brunswick	36	1,020	75	1,131	—
Quebec—					
Roman Catholic	—	—	1,649	1,649	—
Protestant	10	96	191	297	—
Ontario	693	—	3,966	4,659	[1]
Manitoba	1	46	1,459	1,506	30
Saskatchewan	53	4,340	858	5,251	61
Alberta	56	3,809	106	3,971	12
British Columbia	77	—	11	88	10
Totals	**952**	**11,051**	**9,132**	**21,135**	**116**

[1] Included with independent local boards.

Elementary and secondary education extends over 12 or 13 years or grades, depending on the province. The elementary grades terminate with Grade VIII and the secondary grades begin with Grade IX though there is a practical as well as a theoretical separation into three divisions—Primary (Grades I to VI), Intermediate (Grades VII to X), and Senior (Grades XI to XII or XIII). The elementary schools are known as public schools, the secondary schools as high schools. However, many public schools teach some secondary grades and in Prince Edward Island and Newfoundland all grades are taught in the public schools.

In the cities and in some smaller centres there are kindergarten classes for five-year-olds and a few for four-year-olds as part of elementary education. Most children begin Grade I at age six or early seven and many complete the eight grades in seven years. Attendance is compulsory from age seven or eight to age 14 with attendance to age 16 required of urban pupils in some provinces. Emphasis is on the fundamental subjects—reading, writing, arithmetic, health and social studies—with varying additions of science, arts and crafts, music, home economics and shopwork. Many pupils, particularly in rural areas, leave school at the end of elementary schooling and enter employment in agriculture or unskilled occupations.

Secondary education may extend over a period of four or five years. Courses and subjects of study are diversified. A student may choose the academic course leading to university entrance or select courses or subjects preparing for employment in agriculture, commerce or industry. A student may pass from secondary school into commerce or industry at any time during this period provided he or she is beyond the age of compulsory school attendance.

Further education is available to the high-school graduate through teacher-training courses of one or two years for elementary school teachers; specialized technical training extending up to two years in a technical institute—there is at least one such institute in almost every province; nurse-training school where training extends over three years; or university. University courses are available in arts, commerce, science, education, philosophy, medicine, theology, etc. Graduation with a first degree (B.A., B.Sc., etc.) requires three to four years, medicine requires six years and theology seven years. Post-graduate courses require another two or more years.

The French Tradition.—The Quebec Department of Public Instruction is represented in the Cabinet by the Provincial Secretary. Although the Superintendent of Public Instruction is the head of the Department, a Roman Catholic Committee and a Protestant Committee, in charge of the education of Roman Catholics and Protestants, respectively, constitute the Council of Education which formulates policy and superintends the administration of all educational matters. The Council, however, has no authority over many special and technical schools that come directly under various government departments. The Protestant schools follow the English tradition already described; the Roman Catholic schools follow the French tradition.

From the very beginning boys are separated from girls. Both sexes follow through the Primary Grades, I to VII. The girls may then take the Complementary Grades, VIII and IX, and thence enter a regional household science school, begin a four-year course in teacher-training school or enter a superior school where a two-year course leads to a school of fine arts, a commercial course or a nurse-training course.

At the end of the sixth year a boy may enter a classical college for an eight-year course ending with a baccalaureate degree, which is prerequisite for entrance to a professional course in university, or he may continue on to the end of the primary course and then spend two years in the complementary course. From this point he may enter a technical school or any one of four sections of the two-year superior course—commercial, scientific, agriculture, technical or pre-teacher-training school. The latter leads to entrance to a teacher-training school, the others lead to specialized schools and advanced courses in technical schools or, after another year of preparatory work, to the higher schools of applied science, commerce and agriculture affiliated with the universities.

The boy who neither enters the classical college nor goes on to the complementary course may go directly from the primary course to a trade school or one of the regional agriculture schools. These schools offer two-year terminal courses.

Section 2.—Education in the Territories*

Northwest Territories.—Education in the Northwest Territories is carried on under authority of the Northwest Territories Act, the School Ordinance and the Regulations thereunder, and the Indian Act and the Regulations thereunder. Day schools for non-Indian children are operated by the Northern Administration and Lands Branch of the Department of Northern Affairs and National Resources at Fort Smith, Hay River, Fort Resolution and Fort Simpson where the inhabitants are predominantly of white and of mixed blood. Day schools for the education of Eskimos are also operated by that Branch at Aklavik, Tuktoyaktuk, Coppermine, Chesterfield Inlet, Cape Dorset and Coral Harbour in the Northwest Territories, and at Fort Chimo and Port Harrison in the Province of Quebec.

The Roman Catholic Church operates residential schools at Aklavik, Fort Providence and Fort Resolution, and mission day schools at Fort Simpson and Fort Smith; the Church of England operates a residential school at Aklavik. The mission authorities of these churches and other mission organizations also conduct schools for Eskimos at a number of points in the eastern, central and western Arctic and in northern Quebec. Eldorado Mining and Refining Limited at Port Radium and the Discovery Yellowknife Mine in the Mackenzie District also operate day schools.

The only organized school districts are the Yellowknife Public School District No. 1 and the Yellowknife Roman Catholic Separate School District No. 2. The Public School District, established in 1939, operates a modern eleven-classroom elementary and high school which was opened in 1947. The Separate School District was established in 1951 and operates a four-classroom school.

A Superintendent of Schools, with headquarters at Fort Smith, periodically inspects the schools of the Mackenzie District. These schools follow the program of studies for elementary and secondary schools authorized by the Alberta Department of Education. In remote areas, elementary and high school students have access to correspondence-course studies issued by the educational authorities of Alberta and the cost is borne by the Territorial Administration. An inspection of all school facilities for Eskimo children in the Canadian Arctic is made annually by an Education Officer from Ottawa.

A modified elementary school curriculum is followed by some of the federal schools for Eskimos by way of meeting the unique needs in the Arctic regions, and a suitable curriculum for teaching Eskimo children in mission schools is being considered. Because of their nomadic way of life, Eskimos seldom remain long at the settlements and the periods available to the missions for teaching the children are comparatively short. The Eskimos of the Eastern Arctic have long had a system of syllabic writing (expressed as geometric phonetic characters) which most of them can read and write proficiently. Syllabic writing has been used successfully to provide educational material in the Eskimo language on health matters, hygiene and native economics for the benefit of both children and adults. It is hoped that the establishment of schools in Eskimo territory will be influential in teaching the Eskimos to understand, speak and read simple English.

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* Prepared in the Department of Northern Affairs and National Resources, Ottawa.

A program designed to improve education and welfare facilities generally has been initiated in the Northwest Territories. The program now includes regular distribution of educational films, special radio broadcasts to classrooms, the provision of additional equipment and supplies, and increased attention to methods of instruction. Schools are usually staffed by a particular classification of welfare teachers who carry on welfare work in the communities in addition to regular teaching duties.

Yukon Territory.—Public schools in the Yukon Territory are operated by the Territorial Government at Dawson, Mayo, Whitehorse, Carcross, Teslin, Watson Lake, Haines Junction, Kluane Lake, Brook's Brook, Swift River and Elsa. The Whitehorse school has three kindergarten departments. Roman Catholic Mission authorities maintain a school at Whitehorse and one at Dawson.

The schools in the Territory follow the program of studies of the British Columbia Department of Education. The public schools at Dawson and Whitehorse have high school departments providing education leading to university entrance. The university entrance (junior matriculation) examinations are held in June at Dawson and Whitehorse by authority of the Department of Education of the Province of British Columbia. Examination papers are forwarded from Victoria and are returned there for grading. In outlying districts, correspondence courses are provided at a nominal fee by arrangement with the British Columbia Department of Education.

Educational matters in the Yukon Territory are in charge of a Superintendent of Schools, resident at Whitehorse, who is responsible to the Commissioner (*see* p. 86). Inspections of all schools are made periodically by the Superintendent.

The education of Indian children is carried on in day schools operated by the Indian Affairs Branch of the Department of Citizenship and Immigration and in residential schools operated by religious denominations. Full-time day schools are maintained at Whitehorse, Carmacks, Mayo, Moosehide and Old Crow. Seasonal schools are conducted by the denominational workers at Ross River and elsewhere as opportunity arises. At Carcross there is a residential school operated under the auspices of the Church of England in Canada; a new building has been erected and was opened in September 1954. The Baptist church conducts a hostel at Whitehorse where Indian pupils are maintained at the expense of the Federal Government. These pupils attend the Whitehorse Indian School. Indian pupils of Roman Catholic affiliation attend the Indian residential school operated under Roman Catholic auspices at Lower Post, B.C., which is located close to the southern boundary of Yukon Territory. Residential schools in Yukon Territory receive a per capita grant for Indian children registered therein.

Section 3.—Statistics of Schools, Universities and Colleges

Educational institutions in Canada are classified into four types: provincially controlled schools, privately controlled schools, universities and colleges, and federal schools in the Territories and for Indians. The first three types are dealt with in this Section, while information on Indian schools, with the exception of enrolment figures shown in Table 2, is included with the general material on the Indians of Canada given in the Population Chapter, p. 158.

2.—Enrolment in Educational Institutions, classified by Type of School and by Province, School Year 1951-52

Type of School	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	No.	No.	No.	No.	No.	No.
Provincially Controlled Schools—						
Ordinary and technical day schools	83,698	19,128	138,033	106,503	677,034	814,096
Evening schools	1,920	—	4,524	2,287	72,317	73,224
Correspondence schools	6	126	1,481	465	2,050	1,479
Special schools[1]	—	—	334	—	797	549
Teacher-training schools—						
Full time[2]	101	57	267	163	6,117	1,628
Accelerated courses[2]	432	—	42	—	—	532
Privately Controlled Schools—						
Ordinary day schools	—	1,004	4,690	1,852	55,111[3]	18,573
Business training schools—						
Day classes	—	86	537	569	5,900[3]	6,210
Evening classes	—	70	324	299	3,400[3]	5,590
Universities and Colleges—						
Preparatory courses	—	417	511	1,907	19,182	4,249
Courses of university standard	825	263	4,264	2,281	27,196	32,846
Other courses at university	—	124	352	591	17,030	10,953
Indian schools and schools in the Territories	—	48	587	378	2,393	5,963
Totals	**86,982**	**21,323**	**155,946**	**117,295**	**888,527**[3]	**975,892**
Population (June 1, 1952 estimate)	374,000	103,000	653,000	526,000	4,174,000	4,766,000

Type of School	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	No.	No.	No.	No.	No.	No.
Provincially Controlled Schools—						
Ordinary and technical day schools	132,808	168,300	179,691	183,112	—	2,502,403
Evening schools	11,213	2,706	943	18,082	—	187,216
Correspondence schools	1,100[3]	3,706	8,393	5,718	—	24,524
Special schools[1]	18	174	—	154	—	2,026
Teacher-training schools—						
Full time[2]	429	566	302	512	—	10,142
Accelerated courses[2]	315	—	—	—	—	1,321
Privately Controlled Schools—						
Ordinary day schools	6,564	2,842	3,447	6,531	—	100,614
Business training schools—						
Day classes	1,299	731	1,661	1,908	—	18,901
Evening classes	2,296	809	1,550	1,829	—	16,167
Universities and Colleges—						
Preparatory courses	891	955	844	—	—	28,956
Courses of university standard	5,704	6,041	5,157	7,482	—	92,059
Other courses at university	3,914	160	1,288	819	—	35,231
Indian schools and schools in the Territories	3,437	3,493	3,195	5,316	3,235	28,045
Totals	**169,988**[3]	**190,483**	**206,471**	**231,463**	**3,235**	**3,047,605**
Population (June 1, 1952 estimate)	798,000	843,000	970,000	1,198,000	25,000	14,430,000

[1] Schools for the blind and deaf; these are boarding schools and many of the pupils are from provinces other than the one in which the school is situated. [2] Courses for elementary teachers only; those for secondary teachers are included in university enrolment. [3] Estimated.

The provincially controlled schools are the most important group and account for about 90 p.c. of the total enrolment shown in Table 2. These systems of public elementary and secondary education are financed mainly by local school authorities, assisted by provincial grants. There are private schools in all provinces (i.e., schools that are not conducted by publicly elected or publicly appointed boards and are not financed out of public money) but their enrolment is not large in comparison with that of the public schools. At the level of higher education, there is a provincial university in each of six provinces and one or more colleges supported out of provincial funds in the other provinces. In addition, there are 16 private universities most of which receive provincial aid and 163 colleges giving degree credit courses. Universities and colleges also receive grants from the Federal Government. The number of agricultural colleges and schools, by province, with type and length of course offered, is given in the Agriculture Chapter, pp. 388-391.

Subsection 1.—Provincially Controlled Elementary and Secondary Schools*

Enrolment and Attendance.—At the elementary school level, enrolments have been increasing since the school year 1944-45. Birth registrations and immigration figures for the past few years indicate that by 1959-60 the enrolment in the elementary grades will be at least 2,900,000 and in the secondary grades at least 532,000, a total of 3,432,000 compared with 2,502,000 in 1951-52.

Factors operating to increase enrolment include: the introduction of family allowances in 1945 which, while showing its effects on schools most clearly in improved attendance, is also keeping in school to the legal age limit many pupils who might otherwise leave from a few months to two years before they are lawfully entitled to leave; increased emphasis on the holding power of schools; a changed social attitude toward secondary education; increased transportation facilities at public expense; the building of dormitories in some provinces; the larger unit of administration and the establishment of junior high schools and of composite schools to serve rural areas particularly.

Enrolment in provincially controlled schools for the latest school year available is given in Table **2** and average daily attendance is shown in Table **3**.

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* Academic and vocational day schools only.

3.—Average Daily Attendance in Provincially Controlled Schools, by Province, School Years Ended 1943-52

NOTE.—Comparable figures for earlier years will be found in previous editions of the Year Book, beginning with the 1932 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943....	...	12,759	86,630	69,814	515,140	553,954	100,169	138,019	127,214	93,473	1,697,172
1944....	...	12,621	89,490	69,523	518,896	559,796	99,471	136,752	128,051	102,999	1,717,599
1945....	...	12,984	93,831	70,746	523,741	571,625	100,971	135,336	130,095	107,599	1,746,928
1946....	...	14,321	99,367	74,529	529,613	590,801	104,666	138,267	133,162	114,590	1,799,316
1947....	...	14,850	102,099	78,129	533,765	597,400	103,739	135,038	131,011	121,334	1,817,365
1948....	...	14,774	103,858	81,057	545,841[1, r]	613,586[r]	103,744	135,578[r]	133,410	129,859	1,861,707[1, r]
1949....	59,520	14,727	107,914	82,168	566,544[1, r]	638,733[r]	105,240	135,872	136,690	138,941	1,986,349[1, r]
1950....	66,727	15,043	111,818[r]	87,158	587,619[1, r]	660,249[r]	106,008	136,991	146,388	147,584	2,065,585[1, r]
1951....	67,638	15,310	114,285[r]	84,923	605,955[1, r]	674,901[r]	112,749	137,606	150,013	154,077	2,117,457[1, r]
1952....	71,064	15,343	117,349	87,720	636,966[1]	710,227	117,774	139,744	163,454	163,364	2,223,005[1]

[1] Estimated.

Grade Distribution.—A record of the grade distribution of pupils in the provincially controlled schools of all provinces is presented in Table 4.

4.—Grade Distribution of Pupils Enrolled in Provincially Controlled Schools, by Province, School Year 1951-52

Grade	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.[1]	Man.	Sask.	Alta.	B.C.
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Kindergarten....	—	—	—	—	5,199	54,061	—	2,321	—	1,499
Grade I.........	18,004	2,526	28,346	14,619	107,690	91,043	21,618	20,010	22,416	21,195
" II........	10,218	2,160	13,972	13,062	95,607	87,427	15,226	18,594	20,096	20,447
" III.......	10,099	2,223	15,166	13,170	99,142	84,403	15,016	18,472	20,180	20,514
" IV........	9,238	1,936	14,684	12,265	95,570	80,508	14,166	17,328	18,678	19,088
" V.........	8,057	1,952	13,809	11,795	80,832	74,447	13,454	17,009	17,601	17,742
" VI........	7,279	1,894	12,583	10,282	71,089	69,857	12,267	16,522	16,684	16,541
" VII.......	6,219	1,883	11,730	9,224	52,674	64,426	11,528	15,199	15,567	15,453
" VIII......	4,601	1,654	9,511	7,472	29,124	58,996	9,840	13,491	13,958	14,217
" IX........	4,227	1,106	7,630	5,008	19,838	52,118	7,976	10,963	12,288	12,522
" X.........	3,030	1,148	5,508	3,592	10,015	38,866	5,736	7,898	9,009	10,238
" XI........	2,160	522[2]	3,790	2,357	5,896	24,208	4,471	5,968	7,056	7,373
" XII.......	62	72[2]	1,304	1,154	1,805	17,725	1,510	4,169	6,158	5,572
" XIII.....	—	—	—	17	—	9,719	—	—	—	711
Special..........	504	52	—	674	2,553	6,292	—	356	—	—
Unclassified.....	—	—	—	1,812	—	—	—	—	—	—
Totals.......	**83,698**	**19,128**	**138,033**	**106,503**	**677,034**	**814,096**	**132,808**	**168,300**	**179,691**	**183,112**

[1] Province reports lump sums only for Grades I to III and IV to VI; numbers for these individual grades are estimated. [2] Includes 350 Grade XI students and 58 Grade XII students enrolled in Prince of Wales College.

Teaching Staffs.—In 1952, the teaching staffs of provincially controlled elementary and secondary schools comprised 25,216 men and 68,731 women, a total of 93,947. Omitting Quebec for which comparable data are not available, 38 p.c. of the teachers were in cities, 31 p.c. were in towns and villages, 20 p.c. were in one-room rural schools, and the remaining 11 p.c. in schools of two or more rooms outside of urban centres. Again omitting Quebec where 36 p.c. of the teachers were members of religious orders, approximately 25 p.c. of the women teachers were married. Of the total number of teachers in the other nine provinces, at least 10 p.c. were only partially trained or were untrained; also, at least 15 p.c. of the total staff leave the profession each year.

5.—Teachers in Provincially Controlled Schools, classified according to Salary, by Province, School Year 1952-53

NOTE.—Comparable figures for Quebec are not available.

Salary	N'f'ld.	P.E.I.	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Below $1,025..............	615	63	437	537	487	2	5	5	—
$1,025 - 1,524............	1,170	473	1,180	683	1,112	416	621	119	2
$1,525 - 2,024............	509	105	1,292	1,390	3,705	1,720	2,647	678	130
$2,025 - 2,524............	192	74	801	585	6,666	1,100	1,790	1,268	1,117
$2,525 - 3,024............	159	19	475	363	4,745	640	1,129	1,836	1,214
$3,025 - 3,524............	70	2	254	219	3,188	419	490	898	1,104
$3,525 - 4,024............	16	4	123	107	2,999	237	298	694	1,349
$4,025 - 5,024............	5	1	75	102	4,045	206	223	585	1,298
$5,025 - 6,024............	—	—	5	15	1,706	39	28	106	699
$6,025 - 7,024............	—	—	—	2	436	17	3	13	132
$7,025 and over...........	—	—	—	—	27	—	—	—	22
Unspecified...............	—	—	928	—	—	562	—	936	—
Totals...........	**2,736**	**741**	**5,570**	**4,003**	**29,116**	**5,358**	**7,234**	**7,138**	**7,067**
Median salaries........ $	1,199	1,365	1,793	1,740	2,771	2,136	2,132	2,781	3,510

Financial Support.—The income required to support the public elementary and secondary schools is derived almost wholly from local taxation and provincial grants. Fees for elementary schooling may be charged in Quebec. In some of the other provinces fees are charged for secondary grades but, except where in lieu of taxation, they are quite nominal.

In general, school boards submit their budgets to the local municipal councils which levy for and collect the required amounts. School boards in Quebec and some boards in other provinces, moreover, have the power to levy and collect taxes for school purposes. Assessment, on which taxes for school purposes are levied, is the valuation of land and buildings (or improvements in some cases) and usually some other factor such as personal property or business income.

Each province has its own method of apportioning grants to local school boards. These grants are of two types. (1) The basic grant may be calculated on a basic minimum cost, an amount per classroom, salary and qualifications of teacher, average attendance, etc. All provinces adopt some means of increasing equality of opportunity by favouring poorer areas over richer ones. (2) Special grants are paid for such features as transportation, music, arts and crafts, special classes, equipment, building costs, night classes, etc. Special grants are largest in Quebec where there is marked emphasis on training for home industries, arts and crafts.

Newfoundland schools are financed largely from provincial funds. Tuition fees may be charged for Grades I to VIII only, except in the 'colleges' (St. John's) where fees may be charged for Grades I to XI. Fees may be charged also to provide for fuel and cleaning or these may be provided in kind. There is no local taxation for school purposes. Provincial grants are mainly for teachers' salaries, school plant maintenance and repairs, and the erection of buildings.

Table **6** presents a comparative statement of the finances of school boards operating provincially controlled schools so far as this can be done through existing records.

6.—Financial Support of Provincially Controlled Elementary and Secondary Schools, by Province, for Provincial Fiscal Years Ended 1949-51

NOTE.—The receipts shown in this table do not include any amounts raised by loans or the sale of bonds or debentures, as all revenue of this nature must be repaid ultimately with money raised by local taxation. Figures from 1914 are given in the corresponding table of previous Year Books beginning with the 1936 edition.

Province and Year	Provincial Government Grants	Local Taxation	Other Sources	Total Current Revenue Recorded	Debenture Indebtedness[1]
	$	$	$	$	$
Newfoundland—					
1949	3,200,332[r]	—	694,668[2, r]	3,895,000[2, r]	..
1950	3,430,267[r]	—	691,733[2, r]	4,122,000[2, r]	..
1951	3,557,275	—	652,725[2]	4,210,000[2]	..
Prince Edward Island—					
1949	524,783[3]	438,164	32,374	995,321	..
1950	570,908[3]	488,714	62,020	1,121,642	..
1951	626,067[3]	538,504	127,255	1,291,826	..
Nova Scotia—					
1949	4,908,241[3, r]	5,401,966[3, r]	..	10,310,207[r]	..
1950	5,658,799[3, r]	5,974,035[3, r]	..	11,632,834[r]	..
1951	5,598,544[3]	6,226,050[3]	..	11,824,594	..

For footnotes, *see* end of table, p. 340.

6.—Financial Support of Provincially Controlled Elementary and Secondary Schools, by Province, for Provincial Fiscal Years Ended 1949-51—concluded

Province and Year	Provincial Government Grants	Local Taxation	Other Sources	Total Current Revenue Recorded	Debenture Indebtedness[1]
	$	$	$	$	$
New Brunswick—					
1949	4,198,173[3,r]	5,487,746[3,r]	..	9,685,919[r]	..
1950	4,858,332[3,r]	6,660,199[3,r]	..	11,518,531[r]	..
1951	4,774,407[3]	7,024,416[3]	..	11,798,823	..
Quebec—					
1944	6,768,395	23,554,568	2,015,294	32,338,257	72,618,071
1951	15,910,137	50,579,638	2,479,097	68,968,872	54,138,073
Ontario—					
1949	37,558,062	61,646,259[4]	3,516,346	102,720,667	83,877,272
1950	42,661,144	73,195,577[4]	2,906,755	118,763,476	108,830,392
1951	47,355,143	91,569,593[4]	3,776,308	142,701,044	144,648,251
Manitoba—					
1949	4,206,665	11,442,421	588,611	16,237,697	6,440,174
1950	4,086,810	12,875,011	343,165	17,304,986	10,265,632
1951	4,347,543	13,967,343	333,655	18,648,541	12,520,784
Saskatchewan—					
1949	5,825,433	15,751,617	340,594	21,917,644	4,382,943
1950	6,919,369	16,372,024	367,659	23,659,052	5,212,399
1951	7,466,027	17,750,804	404,685	25,621,516	5,815,690
Alberta—					
1949	6,445,559	17,781,887	421,073	24,648,519	15,804,214
1950	7,794,234	19,619,264	481,376	27,894,874	20,200,574[r]
1951	9,717,500	21,879,905	775,068	32,372,473	26,971,892
British Columbia—					
1949	13,450,668	14,451,889	1,631,785[r]	29,534,342[r]	..
1950	14,794,397	16,683,852	874,219	32,352,468	..
1951	18,198,218	22,295,568	1,392,793	41,886,579	..

[1] Net figures, after deduction of sinking funds. [2] Estimated. [3] Includes contributions to teachers' salaries and, in New Brunswick, grants made to schools by the Vocational Education Board. [4] Includes amounts raised by counties and township grants for salaries of rural public school teachers.

Subsection 2.—Private Elementary and Secondary Schools

Private schools include all those not operated by publicly elected or appointed boards. Except in Quebec, they receive no support from public funds. Instruction is similar to that given in public schools except that more opportunities may be given for music, art, etc., and in schools under religious control there is greater emphasis on religious instruction. In most provinces there is some form of inspection or regulation by the provincial Department of Education.

Of the 835 private schools reporting in 1951, 511 were in Quebec, 121 in Ontario, 126 in the Prairie Provinces, 39 in British Columbia and 38 in the Maritimes. There were 5,194 full-time teachers of whom 1,278 were men. Outside of Quebec, the salaries for lay teachers ranged from $1,000 to $5,000 with a median of $1,874 for women, and from $1,200 to $8,000 with a median of $2,700 for men.

In these schools about 65 p.c. of the pupils, including 40,000 girls and 26,000 boys, were in the elementary grades. At the secondary level there were 21,000 girls and 14,000 boys.

The private schools are financed largely from fees, legacies, gifts, or by religious organizations. Annual fees range from very little to upwards of $1,000; in 1952 they averaged $100 for day students and $500 for boarders and expenditures amounted to over $17,333,000. Of that amount, $5,313,000 was paid out in teachers' salaries.

7.—Enrolment in Private Elementary and Secondary Schools, by Province, School Years Ended 1943-52

Note.—Figures from 1921 will be found in the corresponding table of previous Year Books beginning with the 1937 edition. There is one small private school in Newfoundland.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943	738	3,641	3,552	61,566	14,722	4,495	2,308	3,729	5,313	100,064
1944	803	3,452	3,631	60,803	14,967	4,659	2,545	3,767	5,757	100,384
1945	754	3,913	2,843	61,828	15,911	4,593	3,544	2,032	5,704	101,122
1946	804	3,362	2,903	..	16,336	4,643	3,682	2,852	5,576	40,158[1]
1947	803	3,109	2,841	..	15,694	4,125	3,721	2,507	5,195	37,995[1]
1948	877	3,414	2,341	59,020	16,586	4,653	2,710	2,519	5,983	98,103
1949	951	3,894	2,504	60,000[2],[r]	18,251	5,348	2,625	3,630	6,334	103,537[2][r]
1950	971	4,217	2,306	56,240[r]	18,823	5,271	2,630	3,539	6,256	100,253[r]
1951	969	4,709	2,129	55,667[r]	20,141	6,226	3,138	3,527	6,170	102,676[r]
1952	1,004	4,690	1,852	55,111[2]	18,573	6,564	2,842	3,447	6,531	100,614[2]

[1] Exclusive of Quebec. [2] Estimated.

Business Colleges.—Of the 135 business schools reporting in 1952 in eight provinces (exclusive of Quebec and Newfoundland), 15 were in the Maritimes, 75 in Ontario, 26 in the Prairie Provinces and 19 in British Columbia. There were 121 men and 270 women employed as full-time teachers and 29 men and 78 women as part-time teachers.

The girl students far out-number the boys and the enrolment in evening classes almost equals that in the full-time day classes. The 1952 enrolment was: full-time day classes, 1,429 boys and 9,044 girls; part-time day classes, 422 boys and 2,106 girls; evening classes, 2,298 boys and 9,579 girls; correspondence courses, 168 boys and 722 girls. The total for the year was about 2,000 higher than for 1951. More than half (53 p.c.) of the students were 17 to 19 years of age.

Monthly fees ranged from $8 to $35 for day classes and from $6 to $20 for evening classes. Total operating expenditures for 1952 amounted to over $2,500,000 of which $1,085,000 was for teachers' salaries.

8.—Enrolment in Private Business and Commercial Schools (Business Colleges), by Province, School Years Ended 1943-52

Note.—Figures include day and evening classes. Those from 1921 will be found in the corresponding table of previous Year Books beginning with the 1937 edition. There are no schools of this type in Newfoundland.

Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943	207	1,033	347	5,987	11,069	2,890	1,844	3,595	3,806	30,778
1944	197	881	348	6,256	11,724	2,988	1,869	2,780	3,415	30,458
1945	104	684	816	6,957	11,141	3,532	1,200	2,726	2,906	30,066
1946	181	1,080	805	..	14,901	4,099	1,568	3,482	4,021	30,137[1]
1947	212	1,106	1,119	..	15,024	3,721	1,904	3,855	4,009	30,950[1]
1948	227	1,011	958	..	13,917	3,493	1,533	3,731	3,674	28,544[1]
1949	214	1,070	916	13,800[2],[r]	12,938	3,449	1,554	2,969	3,932	40,842[2],[r]
1950	185	1,053	1,099	12,900[2],[r]	11,999	3,648	1,662	2,700	4,356	39,602[2],[r]
1951	152	825	958	11,905[2],[r]	11,101	3,084	1,595	2,694	3,408	35,722[2],[r]
1952	156	861	868	12,500[2]	11,800	3,595	1,540	3,211	3,737	38,268[2]

[1] Exclusive of Quebec. [2] Estimated.

Subsection 3.—Universities and Colleges

Total registration in universities and colleges for the academic year 1951-52 is shown in Table 9. In that year the full-time enrolment of university-grade students was 63,499. In addition there were 29,227 high school and other students registered in the universities and another 63,520 taking part-time and various short courses. Thus the total enrolment in all institutions in 1951-52 was 156,246. The estimated full-time enrolment for 1952-53 at 62,800 continued the downward trend which commenced after the all-time peak of the 1947-48 session, but preliminary returns for 1953-54 indicate a reversal; the estimate for that year is about 64,200.

9.—Total Registration in Universities and Colleges, by Province, Academic Year 1951-52

Province and Item	Undergraduate	Postgraduate	Pre-Matriculation	Others	Total
	No.	No.	No.	No.	No.
Newfoundland—					
Full-time	379	—	—	—	379
Other	446	—	—	—	446
Prince Edward Island—					
Full-time	258	—	416	124	798
Other	5	—	1	—	6
Nova Scotia—					
Full-time	3,504	86	343	31	3,964
Other	632	42	168	321	1,163
New Brunswick—					
Full-time	1,916	38	1,585	5	3,544
Other	258	69	322	586	1,235
Quebec—					
Full-time	19,468	1,250	17,523	2,325	40,566
Other	6,083	395	1,659	14,705	22,842
Ontario—					
Full-time	19,495	1,681	3,806	252	25,234
Other	10,957	713	443	10,701	22,814
Manitoba—					
Full-time	3,895	90	718	73	4,776
Other	1,614	105	173	3,841	5,733
Saskatchewan—					
Full-time	2,317	116	955	104	3,492
Other	3,608	—	—	56	3,664
Alberta—					
Full-time	2,945	70	564	394	3,973
Other	2,023	119	280	894	3,316
British Columbia—					
Full-time	5,672	319	—	9	6,000
Other	1,305	186	—	810	2,301
Totals—					
Regular Session, Full-time	**59,849**	**3,650**	**25,910**	**3,317**	**92,726**
Regular Session, Part-time	**3,466**	**667**	**492**	**4,187**	**8,812**
Summer Schools and Extra-mural Courses	**23,465**	**962**	**2,554**	**27,727**	**54,708**

The enrolment in Canadian universities of full-time students from other countries has increased considerably during the post-war years. In 1951-52 more than half of the outside enrolment came from the United States. Table **10** gives a percentage classification of the outside enrolment for selected years and also the number of Canadian students studying in the United States in the same years.

10.—Students from Other Countries in Canadian Universities and Canadian Students in the United States, Academic Years 1931-52

Year	Total Full-time Enrolment	Total Outside Enrolment	Percentage of Outside Enrolment from—				Canadian Students in U.S.A.
			U.S.A.	U.K.	B.W.I.	Other Countries	
	No.	No.					No.
1931	32,926	2,129	70·7	15·6	2·5	11·2	1,313
1936	35,108	2,443	82·6	6·4	1·3	9·7	1,075
1941	36,319	1,882	78·5	2·2	3·9	15·4	1,458
1946	63,550	2,053	54·4	8·1	12·8	24·7	1,636
1951	68,308	3,188	55·1	5·2	7·9	31·8	4,528
1952	63,499	3,012	50·3	4·4	8·6	36·7	4,317

Of the 63,499 full-time university-grade students in 1952, 2,813 were in receipt of allowances from the Department of Veterans Affairs.

University Graduates.—Awards made during the 1951-52 session included 13,288 bachelor and first professional degrees, 1,601 masterships and licentiates, 234 earned doctorates as well as 222 honorary doctorates (including 38 granted by Laval University on the occasion of its 100th anniversary), and 3,305 diplomas and certificates.

11.—Graduates from Universities and Colleges, Academic Years Ended 1949-52

NOTE.—Figures for 1920-36 are given in the 1938 Year Book, pp. 993-997, and for 1937-48 in the corresponding table of subsequent editions.

Course	1949		1950		1951		1952	
	Total	Female	Total	Female	Total	Female	Total	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Graduates in Arts, Pure Science and Commerce—								
Bachelors of Arts[1]	7,043	2,078	6,791	1,987	6,059	1,869	5,623	1,811
Bachelors of Science (in Arts)	1,324	175	1,242	129	1,067	152	837	125
Bachelors of Commerce[2]	1,362	71	950	42	708	47	663	35
Totals	9,729	2,324	8,983	2,158	7,834	2,068	7,123	1,971
Graduates in Applied Science—								
Bachelors of Applied Science in Engineering	2,999	6	3,598	2	2,427	3	1,770	5
Bachelors of Architecture[3]	84	4	165	6	164	1	147	9
Bachelors of Forestry	271	—	319	—	157	—	158	1
Totals	3,354	10	4,082	8	2,748	4	2,075	15
Graduates in Agriculture, Veterinary Science and Household Science—								
Bachelors of Agricultural Science	893	30	804	23	556	17	332	28
Graduates in Veterinary Science	139	2	150	3	175	16	125	4
Bachelors of Household Science	299	299	275	275	277	277	256	256
Totals	1,331	331	1,229	301	1,008	310	713	288

For footnotes, *see* end of table. p. 344.

11.—Graduates from Universities and Colleges, Academic Years Ended 1949-52—concl.

Course	1949		1950		1951		1952	
	Total	Female	Total	Female	Total	Female	Total	Female
	No.	No.	No.	No.	No.	No.	No.	No.
Teacher Diplomas and Graduates in Education and Social Service—								
Teacher diplomas	774	..	858	..	835^r	..	756	..
Degrees in education or pedagogy	632	152	531	138	577	155	586	181
Librarian degrees and diplomas	95	72	117	88	122	99	102	78
Physical training degrees and diplomas	170	63	151	61	129	60	98	54
Social service degrees and diplomas	268	174	268	162	265	164	240	151
Totals	1,939	461	1,925	449	1,928^r	478	1,782	464
Graduates in Medicine and Related Studies—								
Medical doctors	684	56	817	42	867	61	798	35
Dentists	178	2	329	4	294	2	201	1
Pharmacists	374	51	422	65	406	46	371	38
Degrees and diplomas in nursing	470	470	538	538	492^r	492^r	435	435
Physio-therapy and occupational therapy	154	154	73	73	60	60	75	75
Totals	1,860	733	2,179	722	2,119^r	661^r	1,880	584
Graduates in Law and Theology—								
Law schools	713	17	764	28	712	20	556	26
Roman Catholic theological colleges	335	—	326	—	345	—	365	—
Protestant theological colleges	155	27	181	21	189	17	232	29
Totals	1,203	44	1,271	49	1,246	37	1,153	55
Post-Graduate and Honorary Degrees—								
Honorary doctorates	227	8	198	8	186	11	222	10
Doctorates in courses	194	19	220	21	202	11	234	21
Masters of Arts[4]	646	180	769	175	704	156	723	173
Masters of Science[5]	324	23	417	33	508	28	439	19
Bachelors of Divinity	47	—	73	3	137	6	106	3
Licentiates (except in theology)	417	29	335	34	352	36	281	49
Other post-graduate degrees and diplomas[6]	469	155	611	198	470	162	346	147
Totals	2,324	414	2,623	472	2,559	410	2,351	422

[1] Includes Bachelors of Letters and of Social Science. [2] Includes Bachelors of Accountancy and Secretarial Science. [3] Includes diplomas in Architecture from the Schools of Fine Arts of Montreal and Quebec. [4] Includes M. Com., M. Ed., M. Paed., M.S.W. [5] Includes M.A.Sc., M.S.A., M.Sc.F., M.Arch., M.V.Sc., M.Sc. Dent., M. Surgery (where conferred separately). [6] Except diplomas for teachers and theologians.

Academic Staff.—The total teaching staff, including part-time staff, increased from 9,441 to 10,630 between 1951 and 1952. This increase, in conjunction with the decreased enrolment, brought the ratio of teachers to staff more in line with the experience of pre-war years. By the addition of one-half of the part-time staff to the full-time staff, on the basis of equivalence in instruction, there were eight students for each teacher in the pre-war years. The 1951-52 teaching load corresponded to this figure.

12.—Teaching Complement in Universities and Colleges, Academic Years Ended 1921-52

Year Ended—	Faculties of Arts and Science		Professional Schools		Totals[1]	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
	No.	No.	No.	No.	No.	No.
1921	1,191	242	942	1,179	2,133	1,352
1931	1,776	519	1,127	1,705	2,903	2,077
1941	2,037	579	1,707	2,420	3,452	2,185
1946	2,466	1,010	2,645	2,440	4,937	2,797
1947	2,814	1,002	3,078	2,478	5,246	3,441
1948	3,042	1,119	3,257	2,667	5,447	3,591
1949	2,871	1,202	3,051	2,755	5,339	3,887
1950	2,890	1,153	3,078	3,036	5,246	4,127
1951	3,126	1,260	2,557	2,826	5,539	3,902
1952	3,141	1,354	3,066	3,720	5,874	4,756

[1] Excludes duplication.

Average salaries in 1952-53 showed slight advances over the 1951-52 levels. The figures below indicate median salaries paid to full-time instructors at 17 of the larger universities in Canada.

Classification of Position	*Median Salaries*			
	1952-53	*1951-52*	*1950-51*	*1938-39*
	$	$	$	$
Dean	7,683	7,271	6,950	5,006
Professor	6,406	6,313	5,685	4,345
Associate professor	5,271	5,227	4,613	3,469
Assistant professor	4,415	4,381	3,834	2,708
Lecturer	3,333	3,329	2,847	1,035

By region, the median salaries in 1952-53 showed marked differences.

Classification of Position	*Atlantic Provinces*	*Ontario and Quebec*	*Western Provinces*	*Canada*
	$	$	$	$
Dean	5,000	8,917	7,725	7,683
Professor	4,294	6,877	6,322	6,406
Associate professor	4,076	5,443	5,262	5,271
Assistant professor	3,712	4,515	4,442	4,415
Instructor and lecturer	2,512	3,353	3,529	3,333

Income and Expenditure.—University income figures for 1951-52, as shown in Table **13**, reflect the first payments of the Federal Government grants. Income distribution for the session was: Government grants 52·4 p.c.; student fees 30·2 p.c.; endowments and investments 6·6 p.c.; and other sources 10·8 p.c. The proportion of receipts from investments and endowments has decreased steadily since 1931, when they represented 16·2 p.c. of the current income.

13.—Income and Capital Resources of Universities and Colleges, Academic Years Ended 1921-52

Note.—The larger universities and many of the colleges in Canada are included and represent an enrolment of approximately 80 p.c. of the full-time students of university grade throughout the period. The institutions omitted are mainly those conducted by religious orders where teachers receive little or no salary and the financial returns are, consequently, not comparable.

Year Ended—	Current Income					Deficit[2]	Surplus[2]	Capital Resources		
	From Endowments and Investments	Government Grants	Student Fees[1]	Miscellaneous	Total			Land, Buildings and Equipment	Endowments	Trust Funds
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
1921...	1,497	4,522	1,826	1,244	9,089	80	194	48,124	28,328	..
1931...	2,258	6,925	3,323	1,455	13,961	600	126	82,403	48,459	..
1941...	2,046	6,804	5,143	2,054	16,047	244	116	95,680	55,082	17,422
1946...	2,397	10,485	9,779	3,153	25,815	75	532	102,627	56,975	28,999
1947...	2,314	13,768	13,636	3,203	32,921	350	382	112,409	59,208	34,397
1948...	2,387	14,863	14,903	4,689	36,842	169	347	123,248	63,724	42,302
1949...	2,568	16,218	15,959	4,845	39,590	542	935	139,779	69,012	43,093
1950...	2,950	16,959	15,409	5,140	40,459	601	413	150,178	84,410	37,821
1951...	3,127	18,733	14,025	4,647	40,532	1,037	778	162,372	82,702	34,686
1952...	3,185	25,284	14,544	5,208	48,221	479	1,506	181,393	81,737	37,507

[1] Board and lodging not included. [2] Combined deficits or surpluses of schools reporting.

The Federal Government, as a result of recommendations made by the Royal Commission on National Development in the Arts, Letters and Sciences, instituted a system of university grants, the first of which were paid during the academic year 1951-52. In that year, 83 institutions received a total of $6,991,950. The grants were paid on the basis of 50 cents per head of population in each province, the eligible institutions receiving their share of the provincial allotment on the basis of the number of full-time students at university level attending degree courses. The distribution of payments, by province, is shown in Table 14.

14.—Federal Government Grants to Universities, by Province, Academic Year 1951-52

Province	Institutions	Grant	Grant per Eligible Student
	No.	$	$
Newfoundland	1	180,700	483
Prince Edward Island	2	49,200	184
Nova Scotia	13	321,250	92
New Brunswick	6	257,800	136
Quebec	5	2,027,800	105
Ontario	27	2,298,750	126
Manitoba	7	388,250	99
Saskatchewan	14	415,850	181
Alberta	4	469,750	165
British Columbia	4	582,600	103
Totals	**83**	**6,991,950**	**120**

PART II.—CULTURAL ACTIVITIES RELATED TO EDUCATION

An outline of the *Report of the Royal Commission on National Development in the Arts, Letters and Sciences*.* which was tabled in Parliament on June 1, 1951, is given in the 1952-53 Year Book, pp. 342-345.

Section 1.—The Relationship of Art to Education†

Fine Art Schools, Galleries and Museums.—Fine art appears as an elective subject in the curricula of the faculties of arts in a number of universities, where it may be taken as one subject among five for a year or two; in some, e.g., Acadia University, N.S., there are six or more elective courses. In Mount Allison University, N.B., and in the Universities of Saskatchewan and Manitoba, there is a sufficient number of courses to allow the taking of a Bachelor's degree with specialization in fine art. At the University of Toronto, Ont., an Honour B.A. in art and archæology is offered, as well as graduate work in this field. Departments of fine arts were opened by McGill University (1948-49)—where an Honour B.A. may be taken in fine art and another subject—the University of British Columbia (1949-50) and the University of Alberta (1953-54); McMaster University re-opened its departments in 1951.

There are also schools of art not requiring any fixed academic standing for admission, as they are concerned more with the technical development of the artist. The most widely known of these are:—

Nova Scotia College of Art, Halifax, N.S.
École des Beaux-Arts, Quebec, Que.
École des Beaux-Arts, Montreal, Que.
School of Art and Design, Montreal Museum of Fine Arts, Montreal, Que.
Ontario College of Art, Toronto, Ont.
University of Manitoba School of Art, Winnipeg, Man.
Provincial Institute of Technology and Art, affiliated with the University of Alberta, Calgary, Alta. (Summer session at Banff, Alta.)
Vancouver School of Art, Vancouver, B.C.

Courses in these schools vary in length with the requirements of the individual student, but may extend over as many as four years. Summer schools of art are sponsored by some of the foregoing institutions, by universities, and by various independent groups.

Public art galleries and museums in the principal cities perform valuable educational services among adults and children. Children's Saturday classes, conducted tours for school pupils and adults, radio talks, lectures and often concerts are features of the programs of the various galleries. Many of these institutions supply their surrounding areas with travelling exhibitions, and organizations such as the Maritime Art Association, the Western Canada Art Circuit, the Saskatchewan Arts Board and the Art Institute of Ontario, have been founded to carry on the work on a regional basis. The National Gallery of Canada has a nation-wide program of this nature.

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* Ottawa, Queen's Printer, 1951.

† Revised under the direction of Dr. H. O. McCurry, Director, National Gallery of Canada, Ottawa.

The principal art galleries and museums* are:—

New Brunswick Museum, Saint John, N.B.
Museum of the Province of Quebec, Quebec, Que.
Montreal Museum of Fine Arts, Montreal, Que.
National Gallery of Canada, Ottawa, Ont.
London Public Library and Art Museum, London, Ont.
Art Gallery of Toronto, Toronto, Ont.
Royal Ontario Museum of Archæology, Toronto, Ont.
Art Gallery of Hamilton, Hamilton, Ont.
Willistead Library and Art Gallery, Windsor, Ont.
Winnipeg Art Gallery, Winnipeg, Man.
Regina College Gallery, Regina, Sask.
Edmonton Museum of Arts, Edmonton, Alta.
Vancouver Art Gallery, Vancouver, B.C.
Arts Centre of Greater Victoria, Victoria, B.C.

The National Gallery of Canada.—Founded in 1880 by the Marquis of Lorne, the National Gallery at first served only as an exhibition gallery. Provided with an Advisory Arts Council in 1907, and first incorporated under a Board of Trustees in 1913, it has assembled a permanent collection mainly during the past 40 years. This collection of pictures and sculpture, prints and drawings, representing the styles of past and present of various parts of the world, was assembled for public enjoyment, study, and the improvement of arts and industrial products, and as the necessary basis of a program of art education. The National Gallery Act, amended in 1951, gives the institution a larger Board of Trustees and other advantages.

The collection of the National Gallery to-day is of international repute and is accessible to the whole country by means of catalogues, photographs, colour reproductions and, to a limited extent, by loans. The Canadian section, naturally the most inclusive, is the best available source for the study of Canadian art. Each year, examples of the best contemporary work are added, along with those of earlier periods. The addition, in 1953 and 1954, of eight famous paintings from the Liechtenstein collection constitutes one of the greatest events in the Gallery's history. This group comprises two panels of the *Life of Esther* series by Filippino Lippi and *Bathsheba at her Toilet* by Rembrandt, *The Virgin and Child* by Hans Memling, *The Crucifixion* by Quentin Massys, *A Bavarian Prince* by Bartel Beham, *The Lacemaker* by Nicolaes Maes and *The Church of S.M. della Salute, Venice* by Francesco Guardi. An important group of early Canadian paintings was also added, in addition to a number of contemporary works and examples of graphic art. Drawings by Rubens, Ingres, Turner, Girtin, Gainsborough, Picasso and others have also been added. Prints acquired include examples by the Meister E.S., Israhel van Meckenem, Dürer, Rembrandt, Bonnard, Vuillard and others.

In 1953-54, exhibitions of the art of other countries included: *Contemporary Cuban Painters; Swiss Posters;* and *The Art of India.* An important exhibition, *European Masters*, drawn from Canadian collections, was held at Ottawa, Montreal and Toronto. Among the Canadian exhibitions the most important were the retrospectives of A. Y. Jackson and F. H. Varley. Canadian exhibitions were also sent abroad to Venice, Italy; São Paulo, Brazil; Lugano, Switzerland; New Delhi, India; and elsewhere.

The National Gallery conducts a program of extension work throughout the country. The majority of the exhibitions mentioned above, as well as the annual offerings of the chartered art societies and a variety of smaller collections, are available to the entire country and are widely circulated. About 30 such exhibitions are toured and as many as 200 separate showings have been held annually under the auspices of the National Gallery of Canada. In addition, individual loans of material from the collection are made to centres in many parts of the country each year. In this way original works of art are constantly being brought to the attention of the public. Sets of reproductions are also sent on tour of localities that have not the facilities for handling originals.

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* A complete list of Canadian art museums, societies and schools is included in the Canadian section of the current issue of the *American Art Directory* (New York, R. R. Bowker Co.).

The latest major development in the general educational work of the National Gallery is the Industrial Design Division set up as the result of public interest in bringing the design of Canadian goods up to the best international standards and in fostering distinctive Canadian designs. A number of exhibitions on Canadian industrial art have been held in various parts of the country. In 1953, the Design Centre was opened in the Laurentian Building, Ottawa, to serve as an exhibition centre and as headquarters for the national program in industrial design sponsored by the National Gallery.

Other methods of education in the arts apply more specifically to young people and are designed, in part, to supplement regular school work. The Gallery provides written lectures illustrated by lantern slides on all aspects of art history, reproductions of paintings with introductory texts for art appreciation, school broadcasts, classes for school children at the Gallery, exhibitions of children's art, conducted tours of the Gallery's collections and educational demonstrations. Lecture tours by well-known authorities are also held throughout Canada. In 1953, Eric Newton, a leading English art critic, and his wife, Stella Mary Pearce, an authority on theatre art, travelled from coast to coast lecturing under the sponsorship of the National Gallery.

The National Gallery also maintains a library of art films. These as well as the facsimile colour reproductions and silk screen prints published by the National Gallery are listed in the free leaflet, *Reproductions, Publications and Educational Material*. In connection with the CBC school broadcasts on Canadian artists, the National Gallery in 1953 distributed 250,000 small colour reproductions to school children in all parts of the country. The magazine *Canadian Art*, in the publication of which the National Gallery has taken a leading part, has doubled its circulation since 1945.

Speaking highly of the Gallery's work over many years despite serious difficulties, the *Report of the Royal Commission on National Development in the Arts, Letters and Sciences** made recommendations for the extension and improvement of its exhibition and education services; increases in funds, staff and facilities; maintenance and increase where possible of present appropriations for acquisitions; and, as soon as possible, a new building containing adequate facilities for display, storage, circulation of exhibitions and conservation of paintings.

Between 1952 and 1954 a national competition was held to select an architect for the new National Gallery building. Out of the 104 entries (a record number for an architectural competition in Canada), a jury of international experts chose that of Messrs. Green, Blankstein, Russell and Associates of Winnipeg who submitted a design in the contemporary style distinguished by its simplicity and dignity.

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* Ottawa, Queen's Printer, 1951. *See* also *Royal Commission Studies, a Selection of Essays prepared for the Royal Commission*. Ottawa, Queen's Printer, 1951.

Other Art Organizations.—The leading art organizations of national scope, exclusive of museums and art galleries, include the following:—

Association of Canadian Industrial Designers
Canadian Arts Council*
Canadian Group of Painters
Canadian Guild of Potters
Canadian Handicrafts Guild
Canadian Museums Association†
Canadian Society of Graphic Arts
Canadian Society of Painter-Etchers and Engravers
Canadian Society of Painters in Water Colour
Canadian Society of Landscape Architects and Townplanners
Community Planning Association of Canada
Federation of Canadian Artists
Royal Canadian Academy of Arts
Royal Architectural Institute of Canada
Sculptors Society of Canada.

Section 2.—The Educational and Cultural Functions of the National Film Board‡

If education be considered a process providing materials of thought, and culture be regarded as the self-expression of a people, then the National Film Board, by its terms of reference and by its common practice, is playing a part in both.

The task of "interpreting Canada to Canadians and to other nations" was given to the Board by Parliament after World War II. This was, in a general sense, a mandate to educate Canadians and others in the meaning of Canada. Direct education, of course, remains in the hands of the provinces.

The Board participates indirectly by consulting with the Canadian Education Association on films and series of films. A committee on which both the Board and the Association are represented meets to advise on film programs. The latest result of this co-operation is a new film on the mountain regions of Canada's west coast, *Mountains of the West.* The same consultation and co-operation extend to the production of filmstrips.

The Board's films and filmstrips, as well as still photos are extensively used in Canadian schools. In the year ended Mar. 31, 1953, school showings of Board films reached a total of 94,702. Libraries of informational and educational films are maintained in a number of schools and universities in both Canada and the United States as part of the Board's non-theatrical distribution system. This system, which brings films to people outside the theatres, includes more than 400 film councils in Canada, representing more than 10,000 different groups. Film libraries and depots number 387.

People in other lands are learning about Canada through direct distribution of the Board's films and by exchange agreements through the International Council for Educational Films. These agreements provide for mutual film distribution by member countries on a reciprocal basis. The Board has produced two films for distribution through these channels. *Winter in Canada* and *The Physical Regions of Canada.*

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* An account of the Canadian Arts Council and a list of its constituent bodies appears in the 1951 Year Book, p. 308.

† Formed in 1947 with the object of improving the services of museums as educational institutions by promoting co-operation among themselves, by exchange with other countries and by the training and securing of expert staffs.

‡ Prepared under the direction of the Government Film Commissioner, National Film Board. Other aspects of NFB services are outlined in Chapter XXIX. *See* also Chapter II, p. 104.

The Board's still photos division currently is producing picture books about Canada for use in schools. The Board through its productions, provides a medium of expression for artists, writers, composers, musicians and actors. Real national culture cannot be forced however; rather it is a slow, profound and powerful unfolding from the very roots of popular consciousness. This being so, it is important to record its development as a stimulus to continued growth. This the National Film Board is doing in its films.

Recently, the Board has brought to Canadian audiences films on the Stratford Shakespearean Festival; a music festival in Saskatchewan; the Opera School of the Toronto Conservatory of Music; the Winnipeg Ballet; Canadian artists Frederick Varley and Arthur Lismer; Deichmann pottery in New Brunswick; as well as an excerpt from Hugh MacLennan's novel, *Each Man's Son;* and *L'Homme aux Oiseaux,* a short film written especially for the Board by Roger Lemelin.

Section 3.—The Educational and Cultural Functions of the Canadian Broadcasting Corporation*

Many hours of educational or semi-educational programs are broadcast annually by the Canadian Broadcasting Corporation in the English and the French languages. Whether these programs are directed to children or adults, entertainment is combined with information whenever possible. Spoken-word programs cover a very wide range of interests and are presented as readings, talks, discussions, documentary programs, dramatizations or in forms combined with music.

Pre-school Broadcasts.—Though many story programs for pre-school-age children are broadcast purely as entertainment, a special series has been developed to give young children, particularly in remote areas, many of the benefits of kindergarten training. This series, *Kindergarten of the Air,* is broadcast Monday to Friday for children from two and a half to six years of age. Planned with the advice of kindergarten experts and representatives of the Canadian Home and School Federation, the Federation of Women's Institutes and the Junior League, it includes stories, songs, mental games, keeping-fit exercises, information about animal life and nature study, and encourages good habits of hygiene, eating and relaxation. The program is intended primarily for home listening but has been found useful in many organized kindergarten groups and classes.

School Broadcasts.—In an average school year, more than 1,000 school programs, mostly in dramatized form, are broadcast to all parts of Canada. The CBC also provides upwards of 30 minutes daily broadcasting of specifically planned programs by departments of education to meet classroom requirements. These supplementary aids help teachers to stimulate student imagination and strengthen motives for study. The National School Broadcasts series are planned by the National Advisory Council on School Broadcasting to promote among students a stronger consciousness of Canada and its achievements. During the 1953-54 season, seven such series were planned for students from Grade IV to senior high school. These were: *Voices of the Wild,* on Canadian wildlife; *For Shipment Abroad,* a series dramatizing the Canadian import-export trade with special emphasis on Canadian port cities; *Adventurers All,* a series dramatizing outstanding events in the careers of Canadian explorers; *Hamlet*, a full-length performance of the Shakespearian drama; *Life in Canada Today*, a series of features on the work of Canadians; *Commonwealth Round-up*, comprising four programs on interesting aspects of other Commonwealth nations with specially recorded effects contributed by the broadcasting organizations in the United Kingdom, Australia, New Zealand and Pakistan; *Music in the Making*, a series of five broadcasts in which a new approach to music appreciation was used—a composer, Joseph Haydn, tells about his life with particular emphasis on one of his works, *The Surprise Symphony*, a movement of which was played in each program. This latter series was particularly successful.

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* Prepared under the direction of J. Alphonse Ouimet, General Manager, Canadian Broadcasting Corporation, Ottawa. Other aspects of CBC services are outlined in Chapter XX.

The first experimental television programs for school use were presented during the 1953-54 season. These were four broadcasts planned to provide a visual supplement to the four school radio broadcasts, *Life in Canada Today*. The telecasts were presented in after-school hours for home viewing. Teachers made use of the stimulation and information gained by students viewing the program by conducting follow-up lessons on the next school day. A report on the teachers' evaluation of the experiment was published by the CBC under the title: *Can TV Link Home and School?*

In the province of Quebec, the CBC's French network broadcasts *Radio-Collège*, a series of weekly programs dealing especially with the fine arts, music, literature, theatrical arts, sciences, religion and philosophy. These broadcasts are not designed for classroom use, being of a more adult nature than those on the English-language networks and scheduled, in the main, for other than school hours.

Particulars of school broadcasts are contained in the manual, *Young Canada Listens*, and details of the French network series in the manual, *Radio-Collège*. Both are published annually by the CBC.

Adult Education.—Programs of an adult education nature are presented frequently by the CBC on its radio and television services. In the planning of these programs co-operation is received from various educational organizations. The CBC is an active participant in the work of the Joint Planning Commission, a body established by the Canadian Association for Adult Education for exchange of information and co-ordination of plans for adult education in Canada.

Radio Programs.—Citizens' Forum is a round table program on which a panel of experts discuss important issues of the day. It is arranged jointly by the Canadian Association for Adult Education and the CBC. Its French counterpart, *Les Idées en Marche*, is planned in co-operation with La Société d'Education des Adultes. A similar type of program, but one prepared specially for rural listeners, is *National Farm Radio Forum*, arranged in co-operation with the Canadian Federation of Agriculture and the Canadian Association for Adult Education. All these forum programs are heard by organized listening groups, which continue the discussion of the topic at the conclusion of the broadcast.

For the past three summers the evening sessions of the Couchiching Conference have been broadcast. This week-long conference, organized jointly with the Canadian Institute on Public Affairs, examines Canadian and international affairs in open meetings and group discussions.

Other programs of an educational nature are *Cross Section,* a series of drama documentaries dealing with economic and social questions; various dramatized series in the field of human relations and mental health; and *Trans-Canada Matinée,* a daily afternoon program including informative talks and commentaries designed specially for the woman in the home. This latter program was one of six CBC programs that captured a First Award at the 1954 Exhibition of Educational Radio and Television Programs at Columbus, Ohio. On the French Network, *Forum de Radio-Parents* presents broadcasts designed to help parents on the subject of child care, and general questions sent in by parents are answered by psychologists in the series *Le Courrier de Radio-Parents.* For women listeners the daytime program *Femina* is presented twice weekly.

In addition, talks on a wide range of subjects including international affairs, Canadian history and community activities are broadcast regularly.

Television.—Organized in co-operation with the Universities of Toronto and Montreal and McGill University, the program *Exploring Minds* presents—in panel or lecture form—examples of the work of the modern university. On *This Week* the important world news of the preceding week is discussed by a panel of experts. *Fighting Words* is a program on which guest experts in the fields of arts and sciences discuss controversial quotations sent in by viewers. A daily program—*Living*—presents information of interest to consumers on a wide variety of commodities and services.

Section 4.—Public Libraries

The National Library of Canada, authorized by the National Library Act of June 18, 1952 (1 Eliz. II, c. 330), formally came into existence on Jan. 1, 1953. The work formerly carried on by the Bibliographic Centre and the staff of the Centre were then absorbed by the National Library, which came under the administration of the Secretary of State.

National Library Act.—The Act provides for the establishment of an Advisory Council consisting of fifteen members, including in that number at least one representative from each of the ten provinces; the appointment of a National Librarian, Assistant National Librarian, and staff. Duties of the National Librarian include the establishment of a National Union Catalogue listing the books in every important collection in Canada; the purchasing of book stock; and the publication of a National Bibliography listing books published in Canada, written by Canadians, or of special interest to Canadians. Section II of the Act requires two copies of each book published in Canada to be supplied to the National Librarian within one month of the date of publication; one copy of expensive books must be deposited.

Sketch plans for the National Library building have been prepared for submission to the National Capital Planning Committee. The acquisition of book stock is limited until permanent quarters are available, but activities in other departments of the Library reflect noteworthy progress. The coverage of *Canadiana,* a bilingual monthly publication listing new Canadian publications, has been expanded to include those issued by all provincial governments. By Mar. 31, 1954, individual library catalogues representing some 4,720,000 volumes in some 60 libraries had been microfilmed for the National Union Catalogue. A department to catalogue the volumes now available has been organized and will soon begin its work using the Library of Congress classification. In addition, the Library has assumed the duty of receiving, registering and acknowledging all books deposited under the terms of the Copyright Amendment Act. Publications deposited in accordance with both this Act and the National Library Act will be received and checked at the same point, thus providing a more convenient method for publishers to comply with the regulations.

Regional Library Service.—Regional library service, or an adaptation thereof, now functions in Newfoundland, Prince Edward Island, Nova Scotia, Ontario, Saskatchewan, Alberta and British Columbia. In addition, a Director of Regional Libraries was appointed in January 1954 by New Brunswick, preparatory to the establishment of a regional library system in that Province, and preliminary surveys are being undertaken in Manitoba.

Statistics for the regional libraries in operation during 1953 appear below; those for the two Alberta Regional Libraries for the first time.

1.—Summary Statistics of Libraries Organized for Regional Collaboration, 1953

Regional Organization	Volumes	Circulation	Expenditure		
			Book Stock	Salaries	Total
	No.	No.	$	$	$
Newfoundland Regional Libraries[1]	179,362	278,999	52,900	42,952	122,353
Prince Edward Island Libraries	85,995	165,601	10,838	19,284	38,613
Nova Scotia Regional Libraries—					
Annapolis Valley	20,527	116,066	3,928	11,004	20,094
Cape Breton Island	42,215	239,079	14,732	36,229	59,247
Colchester—East Hants	27,000	133,243	5,024	11,740	20,651
Pictou County	16,782	106,893	4,449	13,574	22,456
Ontario County Library Co-operatives—					
Bruce	10,620	52,800	1,574	2,497	8,487
Elgin	19,656	121,000	4,080	5,355	11,845
Essex	15,638	180,536	3,886	5,582	13,769
Huron	16,361	164,880	6,641	5,639	15,546
Kent	16,639	228,108	4,219	5,554	13,501
Lambton	18,589	162,286	4,567	6,005	14,204
Middlesex	20,011	150,038	6,343	6,264	14,489
Oxford	10,573	107,753	3,597	5,309	14,563
Peel	9,000	44,716	3,714	3,099	8,505
Simcoe	14,166	102,043	3,108	5,973	13,458
Thunder Bay District	5,163	7,572	7,837	3,546	18,391
Victoria	5,884	56,404	2,756	2,971	6,871
Welland	12,839	119,943	4,253	4,372	13,179
Wentworth	14,530	174,094	5,092	10,388	19,186
Saskatchewan Regional Libraries—					
North-Central Saskatchewan	16,289	67,632	3,974	10,457	16,750
Alberta Regional Libraries—					
Barrhead	7,054	24,554	2,867	2,841	6,099
Lacombe	950	[2]	8,000	4,000	15,000
British Columbia Union Libraries—					
Fraser Valley	73,045	492,887	14,152	38,337	77,535
Okanagan Valley	56,222	302,497	15,128	27,723	52,515
Vancouver Island	51,429	309,084	16,666	36,358	68,789

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[1] Includes Gosling Memorial Library.

[2] Records lost in fire which destroyed library headquarters.

1.—Summary Statistics of Libraries Organized for Regional Collaboration, 1953—concl.

Regional Organization	Participating Libraries	School Deposits	Other Agencies	Population Served	Borrowers
	No.	No.	No.	No.	No.
Newfoundland Regional Libraries[1]	26	..	..	130,000	25,385
Prince Edward Island Libraries	24	490	..	98,500	13,500
Nova Scotia Regional Libraries—					
Annapolis Valley	7	85	64	37,649	9,000
Cape Breton Island	9	18	100	111,896	27,155
Colchester—East Hants	4	15	118	41,218	5,600
Pictou County	4	—	133	35,000	10,624
Ontario County Library Co-operatives—					
Bruce	21	121	—	40,331	..
Elgin	113	100	—	33,933	..
Essex	9	240	3	90,574	..
Huron	34	230	10	49,280	..
Kent	10	175	14	62,000	..
Lambton	20	163	3	75,000	..
Middlesex	25	120	32	70,000	..
Oxford	18	135	4	35,918	..
Peel	15	75	1	64,343	..
Simcoe	20	180	11	97,500	..
Thunder Bay District	—	12	14	105,590	..
Victoria	10	87	2	25,862	..
Welland	10	166	12	141,998	..
Wentworth	4	84	28	57,200	..
Saskatchewan Regional Libraries—					
North-Central Saskatchewan	12	—	—	28,728	6,228
Alberta Regional Libraries—					
Barrhead	6	20	—	5,000	2,156
Lacombe	2	24	7	14,000	3,300
British Columbia Union Libraries—					
Fraser Valley	11	120	141	116,013	30,419
Okanagan Valley	55	55	—	67,561	21,943
Vancouver Island	23	63	172	72,878	11,987

[1] Includes Gosling Memorial Library.

Local Public Libraries.—Public library service in Canada includes the large library and its branches in metropolitan areas—sometimes augmented by bookmobile service to outlying districts; small association libraries in villages and hamlets; regional service on a county or wider basis; and the use of boats and the mails to supply remote rural areas. In these ways some 75 p.c. to 80 p.c. of the population receive library service.

The current DBS *Survey of Libraries* presents statistics on library operations for 1951. Operations of the 782 public libraries surveyed are given in Table 2.

2.—Summary Statistics of Public Libraries, by Province, 1951

Province	Volumes	Circulation	Borrowers	Expenditure	Full-Time Staff
	No.	No.	No.	$	No.
Newfoundland	41,649	264,837	24,209	114,489	17
Prince Edward Island	77,417	218,635	27,213	35,033	6
Nova Scotia	144,114	505,793	42,539	189,583	40
New Brunswick	91,032	172,283	14,048	40,238	12
Quebec	1,079,172	1,484,468	86,564	652,557	152
Ontario	4,523,640	15,696,486	839,423	3,662,369	770
Manitoba	179,326	874,313	48,034	207,349	60
Saskatchewan	323,445	938,133	50,673	256,791	51
Alberta	402,563	1,765,593	76,191	352,987	81
British Columbia	603,690	3,179,379	181,713	936,617	208
Totals	**7,466,048**	**25,099,920**	**1,390,607**	**6,448,013**	**1,397**

Of the total libraries, 85 were in cities of over 10,000 population. They employed 1,128 of the 1,397 full-time staff members (80·7 p.c.) and accounted for over 75 p.c. of the total expenditures. Median salaries in the city libraries for 1951 varied with the size of the city as follows:—

Population of City	*Chief Librarian*	*Heads of Branches or Divisions*	*Other Librarians*	*Other Classifications*
	$	$	$	$
Cities 10,000 - 24,999...........	3,033	2,225	2,035	1,787
Cities 25,000 - 99,999............	3,875	2,590	2,068	1,950
Cities 100,000 or over..........	5,000+	3,425	2,094	2,020

In addition to their primary task of circulating reading material, the public libraries undertake varied special services. City libraries in 1951 lent over 90,000 films and 109,437 records, gave 434 concerts and 94 art exhibitions and presented 378 radio and drama shows. Some 4,879 story hours for children were presented, usually on Saturday mornings.

Academic Libraries.—The 179 libraries surveyed in 1951 contained about 7,388,000 volumes. Full-time staff numbered 496 and an additional 546 worked part-time. Of all these, 244 were trained in library science.

Government Libraries.—Sixty Federal Government libraries reported 1,738,838 volumes and 34 provincial government libraries reported 962,332 volumes in 1951. The federal libraries employed 225 full-time staff members and the provincial libraries had 111.

Section 5.—Canada and the United Nations Educational, Scientific and Cultural Organization

Liaison between governmental and voluntary organizations in Canada and the United Nations Educational, Scientific and Cultural Organization is the responsibility of the Department of External Affairs. Canadian participation in UNESCO includes representation at the Sessions of the General Conference; the supplying of advice and information on Canadian matters to the Secretariat of UNESCO; co-operation in projects undertaken by the Organization; the sending of Canadian representatives to international seminars sponsored by UNESCO; the administration of UNESCO fellowships and scholarships tenable in this country; and the promotion of UNESCO publications.

General Conferences of UNESCO are now held every two years. At these conferences progress during the preceding years is reviewed and a program for the next two years is determined. Fundamental education and technical assistance are regarded as the most important parts of the UNESCO program. In the scientific field, research toward improving the living conditions of mankind is emphasized and encouragement is given to projects designed to improve scientific liaison. UNESCO also endeavours to promote cultural exchanges, improve the means of communication among the peoples of the world and stimulate the exchange of persons between nations.

The total UNESCO budget for the year 1954 was $9,461,449, and Canada's share was 3·54 p.c. or $334,935.

More than 100 voluntary organizations, official agencies and departments co-operate with the Department of External Affairs in arranging Canadian participation in the UNESCO program. Canadian support of UNESCO is considered to be an integral part of the country's support of the United Nations program of peace through international understanding.

PART III.—SCIENTIFIC AND INDUSTRIAL RESEARCH*

Section 1.—The National Research Council

Organized research in Canada on a national basis dates from 1916 when the Government of Canada established the Honorary Advisory Council for Scientific and Industrial Research under a Committee of the Privy Council. Provision was made thereby for the planning and integration of research work, the organization of co-operative investigations, post-graduate training of research workers, and the prosecution of research through grants-in-aid to university professors. This was the basis of the Council's work from 1916 to 1924.

A Special Committee of Parliament, appointed to study a recommendation for the establishment of national laboratories, endorsed the proposal and the Research Council Act was revised by Parliament in 1924. Temporary laboratories were secured and research on the utilization of magnesian limestones for refractories was carried out so successfully that a wartime industry, established during World War I, was re-established on a large scale. As a result, in 1929-30 the Government provided funds for new laboratories.

The National Research Building on Sussex Street, Ottawa, was opened in 1932 and in 1939 construction was begun of the aerodynamics building on a 130-acre site adjacent to the Rockcliffe Airport of the Royal Canadian Air Force. Later, other buildings were erected on this site, including wood-working and metal-working shops and separate laboratories for research on engines, gas and oil, hydraulics and structures. These facilities have since been enlarged and extended and new buildings have been provided for engineering, low-temperature studies and high-speed aerodynamics. In 1952 a cosmic-ray laboratory, a thermodynamics building and a large structure to house the Division of Applied Chemistry were added and in 1953 a modern laboratory was constructed, in one of the Montreal Road service tunnels, for the exact measurement of surveyors' tapes. That year also saw the completion of the large and beautiful Building Research Centre, and the construction, on a new 250-acre site on the opposite side of the road, of the new headquarters for the Division of Radio and Electrical Engineering. An underpass connects the two areas. The flight research section of the Division of Mechanical Engineering was transferred from its temporary quarters on the Arnprior Aerodrome to permanent quarters at Uplands Airport near Ottawa.

A Prairie Regional Laboratory, constructed on the campus of the University of Saskatchewan, has been in operation since June 1948. A Maritime Regional Laboratory, built on Dalhousie University campus at Halifax, N.S., was opened in June 1952. The co-operation of a large oil company has made it possible for the Division of Building Research to establish a Permafrost Research Station at Norman Wells, N.W.T. This is one of the most northerly building research establishments in the world.

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* Sections 1 and 3 of this Part were prepared under the direction of Dr. E. W. R. Steacie, O.B.E., President, National Research Council, Ottawa.

The National Research Council consists of the President, two Vice-Presidents (Scientific), one Vice-President (Administration) and 17 other members, each of the latter group being appointed for a term of three years and chosen to represent industry, labour or research in one of the basic natural sciences. Many of the members are drawn from the science departments of Canadian universities.

The Council's scientific and engineering activities are organized in nine Divisions and two regional laboratories, each with its own Director. Four laboratory Divisions are concerned with fundamental and applied studies in the natural sciences: applied biology, pure and applied chemistry, and physics. Three others are devoted chiefly to engineering work—building research, radio and electrical engineering, and mechanical engineering which includes aeronautics and hydraulics. The Division of Medical Research has no laboratories of its own but awards grants-in-aid and fellowships tenable chiefly in the medical schools of Canadian universities.

In addition to its basic research functions, the Council operates an Information Service with a field staff of technical officers who assist the smaller industries across Canada by bringing their operating problems to the attention of the Council. Through a trained research staff, using the extensive library facilities available to the Council, it is usually possible to provide the required information at very short notice.

The Council aids industry in two other important ways. A free and constant flow of personnel and information is maintained between the Council laboratories and industrial laboratories, the aim being to have Canadian industry use the Council's laboratories just as the units of a large company use their own laboratories as sources of scientific information and assistance. The Council also undertakes for any firm, under contract, research problems that cannot be solved by private consulting and testing laboratories and, in return, obtains assistance from many companies. The Council has long-standing and intimate contacts of this co-operative kind with many Canadian industries in various fields.

Associate committees were established by the National Research Council early in its history and have been continued to date. Throughout the years, hundreds of specialists have accepted invitations from the Council to serve on committees and have brought the wealth of their knowledge and experience to bear on the solution of research problems put before them. Members of committees give their time and effort to these special studies without fee or recompense, and their assistance is a source of great strength to the Council.

Assisted research grants have been made by the Council since its inception in 1916. These awards are given to heads of university science departments for the purchase of needed equipment and the employment of junior helpers, usually students. Aid of this kind has been of considerable assistance in enabling the universities to put into operation the excellent graduate schools that now exist in Canada. In 1953-54, more than $2,000,000 was provided out of Council funds for basic research at Canadian universities.

Scholarships and grants in aid of research are awarded annually by the National Research Council. Scholarships awarded in science and engineering include Bursaries, Studentships and Fellowships which have values of $800, $1,100 and $1,400, respectively, for the academic year, to which a summer supplement of $800 may be added. In addition, Special Scholarships valued at $1,900 per year and Post-doctorate Overseas Fellowships at $2,500 are offered. The Council also awards two classes of Graduate Medical Research Fellowships, which have values of $1,800 to $3,500 for awards involving graduate training, and up to $5,000 for senior awards in advanced research. Graduate Dental Research Fellowships of similar value are also made. Some 200 of these different awards were made for 1953-54, totalling in value over $265,000.

In recent years (since 1948), the National Research Council has opened its doors to a limited number of post-doctorate fellows who have been carefully selected on the basis of merit from the universities of the world. There are now about 100 of these keen young scientists working in the laboratories, most of them in chemistry, physics or applied biology. They are appointed for one year only but may be retained for a second year if conditions warrant. This flow of young men through the laboratories has a most stimulating effect; it creates a sort of university atmosphere that is both fresh and invigorating and keeps the Council young.

Principal Activities, 1953-54.—In the Division of Applied Biology and at the Prairie Regional Laboratory much work has been done in 1953-54 on industrial uses for surplus wheat, other agricultural products and waste materials. Some of the projects undertaken in the Division of Applied Biology are outlined in the following paragraphs.

Laboratory and pilot-plant studies of the production of butylene glycol from cereal grains, beet molasses and waste sulphite liquor have been completed. The product is of potential value in the chemical industry and, in one form, as an anti-freeze. Citric acid, now imported in large quantities, has been produced in high yield by a new and more rapid method of submerged fermentation of beet molasses; laboratory studies have been completed and pilot-plant investigation is in progress. Work has also been carried out on production of frozen concentrated milk. For normal storage conditions, slow freezing has been found to give a more stable product than rapid freezing.

At the Prairie Regional Laboratory, studies are being carried out on the drying of damp grain by a new process, with a view to the development of a more economical farm or country-elevator drier. The process originated in the Division of Applied Chemistry.

The Prairie Laboratory has carried out many analyses of the constituent fractions of the oils from flax, rape and safflower seeds and has a program of work under way which should help in making rape oil, in particular, acceptable to the food trades. Most food oils used in Canada are now imported and it is considered important that Canada produce its own requirements by replacing part of the acreage now devoted to wheat with oil-seed crops. Studies are also being made on the fractionation of linseed oil with a view to improving its quality for various industrial purposes.

Pilot-plant studies on the production of insulating boards (similar to Ten-test) from wheat straw have shown that excellent boards of superior quality can be made. Commercial production will be undertaken in the near future if the economics of the project are satisfactory to the industry.

Basic studies on the cereal rusts are continuing. An attempt is being made to grow these organisms in culture in order to ascertain the reason for so many different strains arising. Work is also being done on the biochemistry of starch, lignin, cellulose and other constituents of wheat.

Scientists at the Maritime Regional Laboratory are interested in a different type of project and have concerned themselves with the study of the composition of seaweeds and their use as feeds and fertilizers; the investigation of Irish moss of which millions of pounds are exported annually; the extraction of the gelling agent from this moss and much information about it that can be used in the commercial production of better extracts; and the search for a good method for preparing algin from rockweeds which are abundant in the Maritime Provinces. Algin finds many uses in the textile, food and pharmaceutical industries.

Highlights of the work of other Divisions are as follows:—

Scientists and engineers in Building Research made soil temperature studies in the Far North as part of their permafrost investigations in co-operation with the Army, extended the snow cover survey of Canada, and completed the full-scale testing of a large pre-stressed, pre-cast, 100-ft. reinforced concrete beam.

In the Division of Mechanical Engineering, a start was made on a hydraulic model of a navigation lock for the St. Lawrence Seaway. Designs were prepared for two models of the St. Lawrence River, each representing a five-mile section. A special "re-heat" system, developed to increase the thrust of a jet engine by injecting additional fuel into the tail pipe, reached the testing stage. Aircraft icing, de-icing, and anti-icing research yielded valuable results; the low-temperature laboratory participated in flight testing, under icing conditions, of a CF-100 aircraft equipped with icing protection.

The Division of Radio and Electrical Engineering installed an automatic radio beacon at Charles Island, Hudson Strait. Microwave trial equipment for two isolated fog-alarm stations on the Pacific Coast was designed and built and a machine for sorting paper forms, such as cheques, was patented. The Division devised and patented a new type of mechanical a-c line-voltage stabilizer, which is now being manufactured under licence by a Canadian company. Engineers from the Division and scientists from medical institutes collaborated in the development of electronic devices for use in surgery, including apparatus for resuscitation of the heart.

Developments that have been brought to a reasonably complete stage in the Division of Applied Chemistry include: a coating for transparent surfaces to render them water repellent; a high-strength rubber-base cement, suitable for bonding rubber and various solids; and an antifreeze formulation that prevents the corrosion of zinc-containing alloys frequently encountered with inhibited glycol solutions at low temperatures.

The Division of Physics operates in two Branches—pure and applied. One of the main functions of the applied Branch is the work on standards of length, mass, electricity, radiation, etc. For instance, one of the groups calibrated a set of carbon filament lamps by the use of a small refractory tube immersed in molten platinum; the brightness of the open end of such a tube at the temperature of the solidification of the platinum is recognized by international agreement as the primary standard of light. This Branch also carried on, among many other things, the mapping of urban areas, aimed at providing economical photogrammetric methods for accurate large-scale plans. In the pure physics Branch, a contribution has been made to the knowledge of how certain metals behave over a wide range of temperatures from close to the absolute zero (459·4° below zero F.) up to 200°C. (392°F.). A universal detector has been developed which can be used to pick out any atomic or molecular beam; the apparatus has already been used to study silver, gold, and boron; until recently these three atoms could not be investigated by atomic beam methods.

The efficiency of methods for the production of Raman spectra of gases has been increased; this improvement has made it possible, for the first time, to establish precise values for the geometrical dimensions of the benzene molecule. Variations of cosmic ray intensity at sea level have been studied, by means of Geiger counters and similar equipment, at Ottawa and at the Arctic Weather Station at Resolute Bay. To obtain new information on primary cosmic rays and nuclear reactions caused by cosmic rays, several batches of photographic plates have been sent by balloons to altitudes of over 100,000 ft. (Scientists in the United States helped with this project.)

The Pure Chemistry Division is concerned with investigations in the major fields of chemistry—organic, physical, inorganic, and colloid. Most of the work is fundamental—trying to find out why certain chemical reactions behave as they do, and determining the ultimate spatial structure of unknown compounds.

In medical research, there is the closest integration of the Council's fellowship and medical research program with similar programs of the Defence Research Board, the National Cancer Institute, the Canadian Arthritis and Rheumatism Society, and the Federal Departments of National Health and Welfare and of Veterans Affairs. In 1953-54 five consolidated research grants and 160 individual awards were made by the Division of Medical Research and 21 fellowships were provided. The Division also supported, through substantial grants, the production of growth hormone for experimental purposes by the Connaught Medical Research Laboratories.

In conclusion, it should be noted that the results of pure research, owing to its highly theoretical nature and its essentially long-range character, cannot be "pinned down" easily on a year-by-year basis. Nevertheless, one of the Council's projects in pure research won wide popular acclaim, when scientists at the Prairie Regional Laboratory successfully synthesized three sugars—maltose, sucrose (common sugar), and trehalose. This achievement was hailed as one of the outstanding accomplishments of the scientific world in 1953.

Section 2.—Research in the Atomic Field*

Atomic energy research in Canada had its origin over 50 years ago when Ernest Rutherford came to this country as Macdonald Professor of Physics at McGill University. There, in collaboration with F. Soddy, he announced in 1902 the results of his investigation of the nature of radioactivity, which had been discovered in 1898 by Henri Becquerel. Rutherford determined the fundamental laws governing spontaneous disintegration of radioactive materials, and went on, both in Canada and in England, to make further discoveries of great importance in the development of atomic energy.

Fundamental research into the structure of the atom continued in many countries on a relatively small though fruitful scale over the ensuing years until the first recognition of nuclear fission was announced in Berlin, Germany, by O. Hahn and F. Strassman on Jan. 6, 1939. Soon it was discovered that when a neutron split a uranium-235 atom, not only was a remarkable quantity of energy released, but also additional neutrons were given off. This suggested the possibility of creating a chain reaction so quick that a new and tremendously powerful explosive would be available for military use.

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* Prepared by Clyde Kennedy, Public Relations Officer, Atomic Energy of Canada Limited, Chalk River, Ont.

The onslaught of World War II in August 1939 pushed into the background interest in harnessing the vast energy now recognized to be contained within the nucleus of the atom, but when scientists drew to the attention of their respective governments the possible military application of atomic energy, development work was accelerated.

In Canada, first investigation of the possibility of releasing a large quantity of energy from uranium took place under the direction of Dr. George C. Laurence in 1940 at the National Research Council.

While experiments continued at the National Research Council, the United States moved quickly toward achieving a chain reaction, and on Dec. 2, 1942, the first nuclear chain reaction to be initiated by man began a controlled release of the tremendous energy stored within the atom. This was done by American scientists, at the University of Chicago, working under the direction of Enrico Fermi.

In 1942, the Governments of the United Kingdom and of Canada agreed to set up a joint Canadian-United Kingdom atomic energy project in Canada. By January 1943, British scientists arrived to work with hastily recruited Canadian scientists in a research centre established on Simpson Street, in Montreal, Que. In February, the group moved to the University of Montreal where considerable progress was made in the investigation of fundamental nuclear processes.

At the Quebec Conference in August 1943, President Roosevelt, Prime Minister Churchill and Prime Minister Mackenzie King agreed that closer co-ordination of the allied efforts in the nuclear field was desirable and it was agreed that a large heavy-water pile should be built immediately in Canada. A technical committee consisting of General Leslie Groves, Sir James Chadwick and Dr. C. J. Mackenzie was set up to co-ordinate this joint program on atomic energy. Dr. J. D. Cockcroft of Britain was appointed Director and a Crown company, Defence Industries Limited, was engaged to undertake the detailed design and construction of the atomic energy pile at Chalk River, about 130 miles west of Ottawa. Construction was started in 1944 and by September 1945 a small low-power atomic energy pile, known as ZEEP, was in operation. This was the first pile, outside of the United States, to produce energy by nuclear fission.

In December 1946, by Act of Parliament, all matters concerning atomic energy in Canada were placed under the Atomic Energy Control Board. The Board immediately asked the National Research Council to assume responsibility for the operation of the establishment at Chalk River, and the Council formally took over that responsibility on Feb. 1, 1947. By then, 400 scientists and engineers were engaged on research and development of atomic energy, the largest organization ever created in Canada to carry out a single research project.

Dr. David A. Keys took on direction of the Chalk River project in 1947, with the research program being directed by Dr. W. B. Lewis. Dr. Cockcroft returned to England to take charge of the United Kingdom atomic energy project, which was founded in 1946.

In July 1947, Canada's second reactor (the term reactor has replaced "pile" in atomic energy parlance) went into operation. This reactor was of special significance because it had the highest neutron flux of any known reactor and, like ZEEP, used natural uranium as a fuel and heavy water as a moderator. It has produced radioactive isotopes with a high specific activity for which there is great demand.

Purchasers of Canadian isotopes include the United States, the United Kingdom and various countries in Western Europe and South America. Shipments have also been made within Canada to industries, hospitals and universities.

The growing view that large-scale industrial application of atomic energy was closer at hand than had been expected made the Government decide to have the Atomic Energy project operated by a separate organization freed from all other responsibilities. A new Crown company, Atomic Energy of Canada Limited, was therefore incorporated in February 1952, under the Atomic Energy Control Act, 1946. The new company took over the operation of the project from the National Research Council on April 1, 1952. Dr. C. J. Mackenzie became its first President, and was succeeded in November 1953 by W. J. Bennett, who was also President of Eldorado Mining and Refining Limited. Dr. Mackenzie continued as President of the Atomic Energy Control Board.

In June 1954, the Government decided that the company responsible for the supply of uranium, Eldorado Mining and Refining Limited, and the company responsible for the research and development aspects of the program, Atomic Energy of Canada Limited, should be joined as the work at Chalk River had reached the point where it was believed possible to produce electricity (by the heat created within reactors) within an economical cost range.

So that the work of these two Crown companies could be more closely integrated in the development of atomic power, it was decided that a holding company should be incorporated. The responsibilities of the original companies would not be changed but they would, in future, be Divisions of the holding company which would report to a Cabinet Minister—the Chairman of the Committee of the Privy Council on Scientific and Industrial Research.

In the 1953-54 atomic power program a "feasibility study group" was established in co-operation with several public utilities and private companies, which had as its immediate goal the production of specifications for a pilot power reactor and the evaluation of cost per kilowatt of the electricity which such a reactor would produce.

In June 1954, the Government set up an Advisory Committee on Atomic Power Development, consisting of senior executives of power companies throughout Canada and this committee will keep Canadian power producers informed of the nature and scope of the program at Chalk River. The committee also assists in evaluating the economic importance of possible atomic power in the various regions of the country.

The development of atomic energy was furthered by the experience gained by the decontamination and reconstruction of the NRX reactor which broke down Dec. 12, 1952, and went back into operation Feb. 17, 1954.

Prior to the NRX breakdown it had been feared that a major accident with a reactor of such high power rating might force its abandonment. The decontamination was carried out without injury to personnel despite an unprecedented spreading of highly radioactive fission products and methods of decontamination were developed for a variety of materials. Scientists and engineers gathered information which will be invaluable in future reactor designs. The restoration of the NRX reactor, believed to be the first reactor of high power to be taken apart and reconstructed after several years of operation, has been followed with considerable interest by atomic energy establishments in other countries.

Modifications made to the reactor during its reconstruction have made possible steady operations at 40,000 kw—a power output 33 p.c. higher than was attainable before the breakdown—with the result that a shorter time is now required for many research experiments and for the production of radioactive isotopes. Furthermore, more advanced experiments relating to atomic power development are possible and the testing of components for the new NRU reactor is more effective.

Satisfactory progress was made in the construction of the new NRU reactor at Chalk River. Like the NRX reactor, it will use natural uranium for fuel and heavy water as a moderator. The fuel elements of the NRX reactor are cooled by running river water directly through the reactor. In the NRU reactor, however, the heat will be carried out of the reactor by the circulation of the heavy-water moderator to heat exchangers from where the heat will be carried away by river water. The NRU reactor, moreover, will have a considerably higher neutron flux (density of neutrons within the core).

The Physics Division of the Corporation continued experiments with the Van de Graaff generator, the low-voltage accelerator, and the beta ray spectrometer. Experiments with these machines, together with work previously carried out with a beam of neutrons from the NRX reactor, have led to additional knowledge of nuclear energy output and of the structure of the atomic nucleus.

New and improved electronic instruments were designed for use with the NRX reactor, and continue to be studied in the search for greater reliability and reduced size. A new gamma ray health monitor was developed, for example, and has been in satisfactory operation for several months; development of radiation detection instruments for the Department of National Defence also is continuing.

The Chemistry and Reactor Research Division is carrying out extensive experiments to obtain data upon which the designs of future reactor systems will be based.

Studies have been made of the use of plutonium as a nuclear fuel and new arrangements of fuel elements for power reactors have been studied with the aid of the ZEEP reactor. Chemical and metallurgical methods for processing irradiated uranium fuel elements continue to be developed. The Department of Mines and Technical Surveys is studying the corrosion of these metals and their alloys in different materials that might be used as coolants in reactors. The Department continues to supply the personnel for the Company's Metallurgy Branch.

In the Biology Branch radioactive isotopes are being used to study deficiency diseases in mammals and the synthesis of essential constituents of living cells. Studies of the mechanism by which radiation affects living material were continued with the aid of rapidly reproducing micro-organisms.

The Commercial Products Division of Atomic Energy of Canada Limited, which has its headquarters in Ottawa, handles the marketing—some of it international—of radioactive isotopes produced at Chalk River. The Division's catalogue lists more than 100 different isotopes which may be purchased. Their industrial use ranges from testing welds to the control of thickness of material, such as paper, as it comes through the manufacturing machines. Agriculture and medicine are also served: isotopes such as iodine-131, phosphorus-32, and gold-198 are for use in the human body. The Division also provides an advisory service to users of radioactive isotopes, and a consulting and operating service which includes experimental or research work on a contract basis.

The production of isotopes at Chalk River ceased while the NRX reactor was being reconstructed. However, a supply of certain long-lived fission products had accumulated and these continued to be sold. The United States Atomic Energy Commission assisted the Division by making available certain processed isotopes. From all sources of supply, the Commercial Products Division made more than 1,000 shipments during 1953-54. Moreover, sufficient radioactive cobalt-60—the source of gamma rays in the Cobalt Beam Therapy Units used in the treatment of cancer—was recovered from the NRX reactor to allow the installation of several complete therapy units at various hospitals and the manufacture of the units that contain the cobalt-60 sources was continued at the Division's shops in Ottawa. Immediately after the reactor went back into operation in February 1954, the manufacture of the irradiated cobalt was resumed.

Section 3.—Other Scientific and Industrial Research Facilities

Aside from the work of the National Research Council and Atomic Energy of Canada Limited, Canadian research is carried on by various federal agencies, provincial organizations, universities and industries.

Several provinces in Canada have established Provincial Research Councils to stimulate and support research on problems having special provincial significance.

The universities, of course, form an extremely important part of the Canadian pattern of research, much of it along fundamental lines; however, practical problems are not neglected, especially those of regional interest.

All three types of institutions—federal, provincial and university organizations —have an interest in problems of industrial significance: this is part of the current Canadian pattern of research. Though many Canadian industries now possess research facilities—some of them quite extensive—the main bulk of industrial research to date has been done under government auspices.

Thus the unique problems of the country, particularly its large area coupled with a small population, have led to a typically Canadian organization of research, of which a very strong associate committee system is perhaps the most distinctive feature.

Federal Institutions.—Although research by industrial concerns has been slow to develop in Canada, government research has expanded rapidly, at first because of the need for speeding up the production of raw materials, which were for many years the basis of Canada's export trade, and secondly because of the more recent interest in the processing of these raw materials and because of the necessity to meet the needs of national defence. Federal institutions involved in research include the Departments of Agriculture, Fisheries, Mines and Technical Surveys, National Defence, National Health and Welfare, Northern Affairs and National Resources, and Trade and Commerce; the National Research Council; and Crown corporations such as Atomic Energy of Canada Limited. A system of committees, with nation-wide representation, eliminates unnecessary duplication of work from these national research organizations.

The scientific work of the Department of Agriculture is described at pp. 377-378 of this volume, the work of the Defence Research Board in Chapter XXVIII (*see* Index), specialized work in scientific forest research at pp. 453-461, scientific services concerned with Canada's mineral resources conducted by the Department of Mines and Technical Surveys at pp. 497-501, investigational work of the Department of Fisheries at pp. 590-594; and the work of the National Research Council at pp. 357-361. The activities of the other federal institutions engaged in research are described briefly in the following paragraphs.

Department of National Health and Welfare.—The Department of National Health and Welfare is engaged in research activities, its Food and Drug Divisions, Laboratory of Hygiene, Occupational Health Laboratory and various clinical services conducting scientific studies in their special fields. The Department has provided considerable funds for research in public health. There are, for instance, federal health grants to assist the provinces in work on the prevention and treatment of crippling conditions in children, mental health, tuberculosis, the control of cancer and of venereal disease. To co-ordinate its medical health programs, conferences are held by representatives of the National Research Council, Defence Research Board, the National Cancer Institute and the Public Health Research Grants Committee. These Conferences provide for reasonably clear definition of the field of each organization and have prevented uneconomical overlapping.

Department of Trade and Commerce.—Rapid development of grain production in Western Canada led to the passing, in 1912, of the Canada Grain Act. This Act is administered by a Board of Grain Commissioners responsible for control of the transportation, weighing, grading and warehousing of Canadian grain. The Board soon encountered problems that required scientific study and a Grain Research Laboratory was established at Winnipeg in 1913.

The Grain Research Laboratory is the main centre of research on the chemistry of Canadian grains. It is well staffed and equipped to provide the service required to help maintain and expand domestic and foreign markets for all types of grain. Each year the Laboratory provides certain information required by the Board for administering the Canada Grain Act. The Laboratory collects and tests samples of various crops to obtain information on the current quality of all grains shipped during the crop year. Fundamental research is also undertaken; the program is directed towards increased understanding of what constitutes quality in cereal grains and towards improving the methods of assessing quality.

Canadian Patents and Development Limited.—Canadian Patents and Development Limited is a Crown corporation established in 1948. The primary purpose of the company is to make available to industry, through licensing arrangements, new processes and improvements in processes developed by the scientific workers of the National Research Council. The services of the company have also been made available to government departments and other agencies, and have been extended to Canadian universities. The company arranges to obtain patents of inventions originating in these agencies and handles all licensing matters for them. Any profits that the company may derive from its licensing arrangements are used for further research and development.

Provincial Organizations.—The fact that only a few provincial research organizations exist does not indicate a lack of interest in research by the provinces. Most provincial governments have university laboratories to consult, particularly about local industrial and agricultural problems. Agriculture is particularly well covered because of its great importance as an export industry; the network of Federal Department of Agriculture laboratories and Experimental Stations, together with agricultural colleges and provincial research councils, provides this industry with a very well-developed research service.

Nova Scotia Research Foundation.—This body was created by the Government of Nova Scotia in 1946 to give its people additional scientific and technical assistance in finding new and better ways to utilize the resources of the forest, the sea, the farm, the mine and the process industries. To this end it seeks to correlate and further scientific work on local problems and available resources. It assists universities, colleges, research groups, industries, provincial and federal departments and individuals by loans of equipment, grants, scholarships, laboratory and summer assistants, library, cartographic, photogrammetric and translation services, and technical information. It has supported or collaborated in work on breeding new varieties of plants and root-nodule bacteria; on antibiotics, poultry, blueberry culture, coal-burning equipment, the constitution and underground gasification of coal, the non-destructive testing of mine equipment, the utilization of anhydrite, diatomite, fish waste, gypsum, seaweed, slag, slab wood and fertilizing materials. It has conducted geophysical, geological, seaweed, forest aphidæ and forest ecology surveys and assisted studies on the nutrient cycles of lakes, on X-ray crystallography, and on pressures in underground strata. During the summer of 1954, 85 people were engaged on 27 projects.

Research Council of Ontario.—The Research Council of Ontario was established in 1948 and given the task of advising the Provincial Government on industrial, agricultural and other research activities within the Province. Its responsibility is to establish research projects and programs, whether fundamental or applied, to integrate and co-ordinate all research within the Province, whether public or private, provincial or extra-provincial, and to have public funds sufficient to encourage and carry out necessary research activities.

In addition, the Research Council has the responsibility of administering a scholarship fund which is used for the training of research and scientific workers. Another function of the Council is to encourage the establishment of group research projects in which certain industries and the Provincial Government collaborate.

Saskatchewan Research Council.—The Saskatchewan Research Council was established in 1947 for "research and investigation in the physical sciences as they affect the economy of the Province of Saskatchewan, and such particular matters as may be brought to its attention from time to time by the Lieutenant-Governor in Council". The term "physical sciences" is given a broad interpretation to include biological sciences, agriculture and engineering. The Council encourages both pure and applied scientific research relating to the resources and economy of Saskatchewan, and works in close co-operation with government departments, the National Research Council and the University of Saskatchewan. Among the current projects supported by the Council are: fundamental studies of lignin and related compounds, beneficiation of uranium ores, application of carbon-14 dating, utilization of wheat starch, cultivation of safflower crop, studies in foundation research, preservation of foods by freezing, winter lubrication, and geological and archæological research. The Council also supports graduate research scholarships.

Research Council of Alberta.—The Province of Alberta set up a Scientific and Industrial Research Council in 1921, the promotion of mineral development within the Province being the chief purpose leading to its establishment. The Council operates under an Act somewhat similar to that setting up the National Research Council and is financed by Provincial Government appropriations. The present program is directed to the application of basic and applied science toward the development of the natural resources of the Province. Investigations include studies on coal, the Athabasca oil sands, natural gas, geological research and surveys, soil surveys and irrigation research. The Council maintains a gasoline and oil-testing laboratory and has a group of industrial engineers to provide scientific information to developing industry. The Council laboratories are located at the University of Alberta and work in co-operation with the scientific departments of the University. Operations of the organization are controlled by a council of ten individuals representative of government, the University and industry. The various research projects are under the immediate supervision of advisory committees and the chairmen of these committees form the Technical Advisory Committee of the Council, the body responsible for the integration and operation of the scientific aspects of the program.

British Columbia Research Council.—The British Columbia Research Council, under the sponsorship of the B.C. Department of Trade and Industry, provides a scientific and engineering staff with laboratories at Vancouver, to help British Columbia industries solve their technical problems. Its objective is to enable even the smallest firms to make use of modern technical knowledge and research to improve their competitive position in Canadian and world markets. The Council provides three classes of service: (1) a free information service in collaboration with the National Research Council; (2) assistance to specific firms at cost where information cannot be supplied from existing knowledge; and (3) at the Council's expense, research on problems of general value to the industrial development of the Province.

The Ontario Research Foundation.—The Ontario Research Foundation was established in 1928, and is financed by an endowment fund composed of subscriptions from manufacturers, corporations, private individuals, and a grant from the Provincial Government on a dollar-for-dollar basis with the other contributions. The Foundation carries on research to assist agriculture and industry in developing the natural resources of the Province. A study has been made of the physiography and climate of southern Ontario and also of the parasites found in wildlife in this Province. Many investigations have been undertaken in the industrial field and the Foundation is well equipped to work in metallurgy, textiles, chemistry and biochemistry. The services of the Foundation are at the disposal of industry on a fee basis, and consultative services, testing, short-trial studies and long-term investigations have been undertaken for hundreds of firms. The work has resulted in better products and in more efficient processing.

The Banting Research Foundation.—The Banting Research Foundation supports the work of the Banting and Best Chair of Medical Research in the University of Toronto and aids medical research throughout Canada by making grants-in-aid to those who submit problems of sufficient medical interest to the Board of Trustees. The Board meets and makes grants generally three times a year, around June 1, Oct. 1 and Feb. 1. Five members of the Board of Trustees are appointed by the Board of Governors of the University of Toronto and the Alumni Association of the University of Toronto, and these five members appoint two other Trustees, then the seven members appoint an eighth Trustee.

The Rockefeller Foundation.—The Canadian activities of the Rockefeller Foundation include appropriations to various Canadian universities, institutions and organizations for research in certain limited fields in the natural and social sciences, in the humanities and in medicine and public health, and the financing of post-doctoral fellowships to individual Canadians for work in fields related to the Foundation's general program. Under the public health program, aid is given for teaching in public health and nursing.

University Research.—In eight of the ten Canadian provinces there is at least one major university with graduate-school facilities for training in research. In Ontario there are four; in Quebec, three. In addition, a large number of universities and colleges provide first-class undergraduate training, or training in special fields. Thus, Canadian universities provide adequate training up to the doctorate level in practically all fields of science.

In the main, research in Canadian universities has followed the traditional pattern found in the graduate schools of the British Commonwealth. It has been largely fundamental but, in certain schools, a great deal of research has been done on basic local problems. The universities co-operate with Federal Government departments, provincial government departments, and the National Research Council in researches on most of the natural resources. One such co-operative project has been established at the University of Toronto in the form of a computation centre. This is operated by the University and financially supported by the Defence Research Board and the National Research Council, with the object of developing computation equipment and of training competent operators in this new and complex field of work.

Industrial Research.—In the past, many small industries and some large ones in Canada have been unaware of the value of research to their industries and to the country, partly because many Canadian companies are subsidiaries of companies in the United Kingdom and the United States, and partly because small companies find it impossible to finance their own research. This general problem is well recognized in Canada, but cognizance should be taken of Canada's vast areas, absence of concentration of similar industries, and proximity to the relatively vast research facilities of the United States.

What Canada has done about industrial research, in the face of these rather formidable difficulties, has been partly covered above: in one way or another Canadian universities, provincial institutions and federal organizations have aided Canadian industry.

This picture is changing very quickly. To-day, Canadian industries are rapidly becoming aware of the value of research and many industries now possess research facilities—some of them quite extensive. A survey made by the Canadian Manufacturers' Association a few years ago showed that over 360 of their member companies maintained laboratories in which more than 3,100 persons were employed in research, testing or control. Examples of Canadian industries with powerful research organizations are: Aluminum Laboratories Limited at Kingston, Ont.; Consolidated Mining and Smelting Company at Trail, B.C.; and Ayerst, McKenna and Harrison Limited at Montreal, Que.

Aluminum Laboratories Limited undertakes both fundamental and applied research; its divisions include an industrial group to bridge the gap between scientific development and commercial application, plus mechanical testing, metallography, electro-metallurgy, physics, chemical-metallurgy, analysis and documents. Experimental alloys are constantly being produced and tested for such properties as hardness and resistance to corrosion.

The Consolidated Mining and Smelting Company maintains a large Research and Development Division. It has special laboratories equipped for study in ore-dressing, electrolysis, gas reactions, metallographic and petrographic work, X-ray diffraction of crystals, materials testing, and instrument design, and has many important developments to its credit, including the differential flotation process used on ores of the famous Sullivan mine.

Ayerst, McKenna and Harrison Limited has followed an extensive research program for some years in such fields as vitamins, antibiotics, liver extracts, bacteriological products, sex hormones, gland products, and veterinary medicines. It also does basic research and supervises the Canadian Government plant at St. Laurent for the large-scale production of penicillin.

Other companies with sizable research departments represent many diversified interests, for example: Canadian Industries Limited, International Nickel Company, Dominion Rubber Company, Imperial Oil Limited, Shawinigan Chemicals Limited, the Maple Leaf Milling Company, Canadian Breweries Limited and Canada Packers. There are, of course, many others.

To an increasing extent, recent scientific developments are leading to a reasonably swift industrial application, as shown by the establishment of such companies as Isotope Products Limited at Oakville, Ont., and Computing Devices of Canada Limited at Ottawa, Ont.

To date, however, a large amount of industrial research continues to be done under Government auspices, and sometimes with the co-operation of universities. Two further examples of this Canadian habit of co-operation between industries and other organizations may be cited: the Research Division of The Hydro-Electric Power Commission of Ontario, a provincial service, and the Pulp and Paper Research Institute, intimately associated with McGill University. These organizations are briefly described in the following sections.

The Hydro-Electric Power Commission of Ontario.—The Research Division of Ontario Hydro, with a present staff of 300, provides testing, investigation and research services for all phases of the utility's engineering design, construction work, and system operation and maintenance. The Division maintains a close liaison with other research organizations and power utilities, and staff members participate in the committee work of major technical societies and standardizing associations.

Electrical investigations pertain to improvements in equipment for generating, transmitting, distributing and utilizing power. Problems of electrical insulation, system disturbance recording, protection against lightning, energy metering and illumination are among those studied in such investigations. Attention is given to the performance and efficiency of power equipment, to improved measuring techniques, and to means of minimizing the hazards of electric shock.

Among the structural and mechanical topics studied are the following: metallic corrosion; stresses in structures; noise and vibration conditions; soil mechanics as related to foundations, roads, and earth dams and dykes; the physical properties of structural components and of numerous items such as conductor joints and line hardware; the mechanical performance and safety features of various types of machines; welding materials, techniques and applications; and a variety of problems associated with the design of concrete structures, the application of masonry materials, and the production, placement and quality control of all concrete used.

In addition to chemical analyses and tests performed on a wide range of materials and products purchased, chemical research work is conducted with regard to such subjects as wood preservation, plastics applications, protective coatings, brush and weed control, lubrication, liquid electrical insulants, water treatment, thermal insulation, and corrosion prevention.

Other studies contributory and supplementary to the main branches of work are carried on in the fields of physics, biology, meteorology, petrology and mathematics.

The Pulp and Paper Research Institute of Canada.—Because so much of the Canadian economy is dependent upon pulp and paper, the need has long been recognized for research on cellulose chemistry and other technologies associated with the use of cellulose. In 1913 the Federal Government established the Forest Products Laboratories in Montreal. Its Pulp and Paper Division began to receive support from the pulp and paper industry in 1925 and soon after started to work closely with the Chemistry Department of McGill University. The present building on the University grounds was opened in 1929 to provide increased accommodation and facilities for its expanding activity in pulp and paper research. In 1950, the Institute became an independent corporation under federal charter, administered by a Board of Directors consisting of appointees from McGill University, industry, and the Federal Department which is now Northern Affairs and National Resources.

This Corporation has taken over the building it occupied on the University grounds, together with all its equipment—the land remains University property and is lent to the Corporation. The Corporation has complete control of the operation, subject to the provision that work leading to degrees will be under the control of the appropriate faculties of the University.

McGill's entire Division of Industrial and Cellulose Chemistry and part of the Division of Physical Chemistry form integral parts of the Institute; to some degree, the Institute has also become the bureau of standards for the pulp and paper industry.

Numerous contributions to the fundamental knowledge of the chemistry of cellulose and lignin, the chemical and mechanical pulping of wood, the behaviour of fibres in water, and the testing of pulp and paper have been made by Institute personnel. At present, studies in physical chemistry are being conducted mainly on the surface chemistry and swelling of cellulose, and the flocculation of suspensions of fibres, while research in organic chemistry is being carried out on the reactivity of cellulose, the properties and constitution of cellulose derivatives, and the chemistry of lignin and of bark. Much work is also being done on the various methods of producing chemical pulp.

CHAPTER IX.—AGRICULTURE

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Agriculture, including stock-raising and horticulture, is the most important of the primary industries of the Canadian people, employing, according to the Census of 1951, 15·6 p.c. of the total labour force and 19·2 p.c. of the labour force males. In addition, agriculture provides the raw materials for many Canadian manufactures and its products in raw or manufactured form constitute a very large percentage of Canada's exports. The area of agricultural land is shown by province at p. 20 of this volume.

Section 1.—Federal Government in Relation to Agriculture*

The creation of the Department of Agriculture is provided for in Sect. 95 of the British North America Act (1867), which states, in part, that "in each province, the legislature may make laws in relation to agriculture in the province" and that "the Parliament of Canada may from time to time make laws in relation to agriculture in all or any of the provinces; and any law of the legislature of a province relative to agriculture, shall have effect in and for the province as long and as far as it is not repugnant to any Act of the Parliament of Canada". As a result of this provision, there now exists a Department of Agriculture, with a Minister of Agriculture at its head, in the Federal Government and in each of the provinces except Newfoundland where agricultural affairs are dealt with by the Agricultural Division of the Department of Mines and Resources.

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* Except as otherwise indicated, this material was prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, Ottawa.

Subsection 1.—General Policy and Price Stability

All the activities of the Department of Agriculture are directed toward the production of marketable farm products. Apart from the initial research and experimentation in connection with operations on the farm itself, it is essential that processing, grading and inspection of farm products should be of a high standard if markets both at home and abroad are to be retained and new ones developed. It is with this end in view that the inspection and grading activities of the Department have become of increasing importance. By inspection and grading the buyer is able to obtain a product suited to his requirements; the producer is compensated according to the grade of his product and is thus encouraged to produce a high-quality commodity.

The results of experimental and research work and the policies of the Department, in general, are made available to farmers and to the public through bulletins, the press, radio and screen. Releases on market conditions and prices are a regular feature of this publicity.

The Federal Government has passed a number of Acts designed to give price stability in marketing agricultural products. The most important of these is the Agricultural Prices Support Act, 1944, which permits the Federal Government to stabilize the price of any agricultural product, except wheat and coarse grains which are marketed under other legislation, by outright purchase or by underwriting the market through guarantees or deficiency payments. The following products have been supported under the Act when occasion arose: potatoes, apples, dried white beans, extracted honey, dry skimmed milk, creamery butter, shell eggs, cheess, hogs and cattle.

Another Act under which price support may be extended is the Agricultural Products Co-operative Marketing Act, 1939. Under this Act the Government assists in financing initial payments made by co-operatives to primary producers on delivery of the products for sale. Initial payments are subject to negotiation between co-operative and government but may not exceed 80 p.c. of the average returns for like grades and qualities during the previous three years. The procedure is for the Government to guarantee banks against loss in advancing funds to co-operative organizations with whom agreements have been signed. The legislation has been used extensively by co-operatives, and agreements through the years have covered onions, potatoes, corn, many seed crops and ranch-bred fox and mink pelts.

There is a third piece of federal legislation that has a bearing on price support. A number of provincial governments have legislation providing for the establishment of a Board to regulate or control the marketing of agricultural products sold within the province concerned. Under the British North America Act, a provincial government cannot legislate with regard to products marketed outside the province or in export trade. Under the Agricultural Products Marketing Act, 1949, the Federal Government may, at discretion, permit such marketing legislation to be applied in whole or in part to the marketing of agricultural products outside the province concerned and in export trade.

Under the Agricultural Products Board Act, 1951, the Board may buy, sell, export and import agricultural products when directed by the Governor in Council.

Farm Credit.—The Federal Government has made provision for the extension of credit to farmers under the Canadian Farm Loan Act and under the Farm Improvement Loans Act. The Prairie Grain Producers' Interim Financing Act, 1951, was emergency legislation intended primarily to relieve any hardship caused by the extremely unfavourable harvesting conditions of that autumn.

*The Canadian Farm Loan Act, 1927.**—Long-term farm mortgage credit is made available to Canadian farmers under the provisions of this Act, which is administered by the Canadian Farm Loan Board. The Board makes loans for the purchase of live stock, farm equipment and farm land, for improvements, for refinancing debts and for covering operating expenses. The Board also provides short- and intermediate-term credit to its long-term mortgage borrowers by means of five-year second mortgages with collateral chattel security.

The Canadian Farm Loan Act was amended on June 18, 1952, to permit the Board to lend up to 60 p.c. of appraised value on first mortgage and up to 70 p.c. on combined first and second mortgage with the maximum first-mortgage loan limited to $10,000 and the maximum of first- and second-mortgage loan limited to $12,000. In the year ended Mar. 31, 1953, a total of $5,852,300 was approved for loans. This was 38 p.c. higher than the previous year, largely attributable to the wider field of operations resulting from the changes in the Act.

Principal assets under administration increased by $1,724,106 during the year to $31,588,657 at Mar. 31, 1953, the highest figure for 10 years.

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* Revised by W. A. Reeve, Secretary, Canadian Farm Loan Board, Ottawa.

1.—Loans Approved and Disbursed under the Canadian Farm Loan Act, Years Ended Mar. 31, 1944-53

Note.—Figures for previous years are given in the corresponding table of former Year Books beginning with the 1940 edition.

Year Ended Mar. 31—	Loans Approved					Loans Paid Out		
	First Mortgage		Second Mortgage		Total Amount	First Mortgage	Second Mortgage	Total Amount
	No.	Amount	No.	Amount				
		$		$	$	$	$	$
1944.........	603	1,315,950	162	90,850	1,406,800	1,251,949	84,154	1,336,103
1945.........	728	1,623,000	176	100,700	1,723,700	1,561,174	100,235	1,661,409
1946.........	918	2,161,050	258	163,050	2,324,100	1,977,902	143,305	2,121,207
1947.........	1,312	3,165,250	404	253,900	3,419,150	3,030,915	242,896	3,273,811
1948.........	1,301	3,145,150	517	315,400	3,460,550	2,911,167	274,073	3,185,240
1949.........	1,821	4,450,100	756	469,200	4,919,300	4,169,070	425,966	4,595,036
1950.........	1,949	4,715,500	801	473,900	5,189,400	4,480,779	462,150	4,942,929
1951.........	1,796	4,312,450	680	409,550	4,722,000	4,288,866	404,213	4,693,079
1952.........	1,437	3,929,500	494	308,900	4,238,400	4,131,141	337,951	4,469,092
1953.........	1,685	5,458,750	559	393,550	5,852,300	4,766,149	342,410	5,118,559

2.—Loans Approved under the Canadian Farm Loan Act, by Province, Year Ended Mar. 31, 1953

NOTE.—Figures for previous years are given in the corresponding table of former Year Books beginning with the 1940 edition.

Province	Loans Approved				
	First Mortgage		Second Mortgage		Total Amount
	No.	Amount	No.	Amount	
		$		$	$
Prince Edward Island	72	203,800	9	4,900	208,700
Nova Scotia	41	116,850	1	1,000	117,850
New Brunswick	69	200,850	8	5,800	206,650
Quebec	149	457,350	61	40,600	497,950
Ontario	345	1,360,250	59	45,350	1,405,600
Manitoba	177	571,050	97	73,300	644,350
Saskatchewan	499	1,631,800	269	189,000	1,820,800
Alberta	203	489,850	43	23,800	513,650
British Columbia	130	426,950	12	9,800	436,750
Totals	**1,685**	**5,458,750**	**559**	**393,550**	**5,852,300**

*The Farm Improvement Loans Act.**—The Farm Improvement Loans Act, administered by the Department of Finance, is designed to provide intermediate-term credit and a type of short-term credit for farmers to enable them to equip, improve and develop their farms. There is scarcely anything a farmer wants in the way of mechanical aids for his farm operation or for his home for which a loan may not be made. Assistance may also be obtained for the purchase of live stock, principally foundation or breeding stock; for installation or repair of farm electric systems; for repair, alteration or construction of farm buildings, including the home; and for fencing, drainage and other development projects. Credit is provided on security and terms that are convenient and suited to the individual borrower.

The chartered banks are the lending agency under the Act. The legislation, originally operative for three years, 1945-47, has been extended from time to time for three-year periods. The Federal Government guarantees each bank against loss up to 10 p.c. of the total loans made by it during the period. Under the Act, the guarantee is limited by a provision stating that it will not apply to any loan made after the aggregate of all loans made by all banks in a given period reaches an amount fixed by statute. When, in February 1951, the Act was extended for another three years, the amount fixed was $200,000,000. Within two years the loans almost totalled this amount, and a further extension of the Act was made for three years from Apr. 1, 1953. The aggregate of loans for this three-year period, affected by the guarantee, is set at $300,000,000. By Dec. 31, 1953, 175 claims amounting to $90,771 had been paid under the guarantee.

Loans may be obtained for terms up to 10 years with interest not to exceed 5 p.c. The maximum amount to be advanced to a borrower, at any one time, was increased to $4,000 by the legislation of 1953. The borrower himself must provide from 10 p.c. to 40 p.c. of the cost of his project.

By Dec. 31, 1953, $313,403,652 or 69·4 p.c. of the total of all loans made had been repaid. Of the loans made during the first three years of operation, all but 0·4 p.c. had been repaid; of those made during the second three years, all but

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* Prepared by D. M. McRae, Supervisor, Farm Improvement Loans Act. Department of Finance, Ottawa.

2·8 p.c. had been repaid; of those made during the next two years, all but 32·5 p.c. had been repaid; and for the nine months of the fourth period ended Dec. 31, 1953, 15·1 p.c. of the loans made had been repaid.

3.—Loans made under the Farm Improvement Loans Act, by Purpose, 1945-53

Purpose	1952		1953		Total Loans Since Inception in 1945	
	Loans	Amount	Loans	Amount	Loans	Amount
	No.	$	No.	$	No.	$
Purchase of agricultural implements	75,347	90,818,129	73,934	88,057,198	365,656	409,030,397
Construction, repair or alteration of, or additions to any structure on a farm	2,923	3,474,114	3,876	5,057,563	19,337	21,960,388
Purchase of live stock	3,175	2,899,824	3,694	3,053,914	15,192	12,510,527
Improvement or development project	1,420	843,724	1,896	1,300,305	12,636	6,357,591
Purchase or installation of equipment or electric system or alteration of electric system	359	155,924	456	347,666	2,542	1,319,239
Fencing or drainage	91	67,437	106	76,114	539	354,700
Totals	**83,315**	**98,259,152**	**83,962**	**97,892,760**	**415,902**	**451,532,842**

4.—Loans made under the Farm Improvement Loans Act, by Province, 1945-53

Province	1952		1953		Total Loans Since Inception in 1945	
	Loans	Amount	Loans	Amount	Loans	Amount
	No.	$	No.	$	No.	$
Newfoundland	44	49,900	55	68,274	104	121,553
Prince Edward Island	1,782	1,756,128	1,671	1,497,575	5,759	5,277,273
Nova Scotia	888	852,297	1,077	945,862	3,422	3,022,939
New Brunswick	866	926,499	896	925,977	3,142	3,283,204
Quebec	6,049	7,128,775	7,621	8,722,234	24,654	27,368,034
Ontario	11,299	12,245,803	11,813	12,971,331	53,021	55,698,714
Manitoba	10,061	11,225,437	9,547	10,639,177	55,272	57,727,371
Saskatchewan	28,127	35,365,330	26,334	33,309,549	137,044	156,551,023
Alberta	22,130	26,495,163	22,526	26,207,368	122,118	130,922,365
British Columbia	2,069	2,213,820	2,422	2,605,413	11,366	11,560,366
Totals	**83,315**	**98,259,152**	**83,962**	**97,892,760**	**415,902**	**451,532,842**

Prairie Grain Producers' Interim Financing Act, 1951.—This Act, which came into force Jan. 15, 1952, provides short-term credit to grain producers in the Prairie Provinces who, because of congested delivery points or inability to complete harvesting of their grain, are in need of credit until their grain can be delivered. Individual advances can be made to a maximum of $1,000.

Prairie Farm Assistance Act.—The Prairie Farm Assistance Act, passed in 1939 and administered by the federal Department of Agriculture, provides for direct money payments by the Federal Government, on an acreage basis, to farmers in areas of low crop yields in the Prairie Provinces and the Peace River District of British Columbia. The Act was designed to assist the municipalities and provinces, in years of crop failure, to meet relief expenditures which would normally be too great to be assumed by them. The Act provides that payments be made to farmers under certain conditions and terms and, in order that Federal Government costs may be defrayed to some extent, it is required that 1 p.c. of the purchase price of all grains (wheat, oats, barley and rye) marketed in the Prairie Provinces be paid to the Federal Government and set aside in a special fund for the purposes of the Act.

If the farmer, who may be an owner, a tenant, or a member of a co-operative farm association engaged in farming, is located in a crop-failure area, he may be awarded assistance on not more than one-half of the cultivated land or a maximum of 200 acres. The rates of payment range up to $2.50 per acre.

From the inception of the scheme to Mar. 31, 1954, the total amount paid out under the Act was $146,105,574. The amount collected under the 1-p.c. levy to Feb. 28, 1954, was $79,708,145.

Subsection 2.—Agricultural Research and Experimentation

The Department of Agriculture conducts, on a broad scale, scientific research and experimentation on the control of pests and diseases, the nutritional requirements of plants and animals, the breeding and testing of new species and varieties, the micro-biology of soils and foods, investigations of crop production and cultural methods, and many other matters. This work is carried on mainly by the Science Service and the Experimental Farms Service and, in addition to providing information on current production problems, is of paramount importance to the long-time well-being of agriculture.

Conservation of the soil is of basic importance to agriculture and research in the form of soil surveys and study of methods for the protection and conservation of soil resources is carried on by the Department in collaboration with the provincial governments. Studies include the chemistry of the soil, cover crops, value of manure and fertilizers, cultural methods, use of tillage machinery and development of large land-reclamation projects.

The Department has for many years conducted investigations into the control of insects and diseases of forest trees. The limited silvicultural work carried on has aimed at maintaining a supply of trees suitable for planting on the prairies as shelter belts against the wind and to prevent soil and snow drifting. Basically, this is also a soil-conservation measure.

Much of the research and experimental work is concerned with crop plants for, after the soil itself, they are of chief importance. This work includes the breeding and testing of suitable varieties of crops to be grown under the varying climatic conditions throughout Canada. The culture and nutritional value of crop plants and the suitability of food crops for human consumption—even their appeal or lack of appeal to a somewhat discerning housewife—are continuously under study.

Work on live stock includes mainly the feeding, care and handling of stock, its protection from insects and diseases, and the production of suitable market and breeding types. A limited amount of work has also been done on the production of new strains of animals.

Research and study of processed products such as milk, butter, cheese and meat, and of fruits and vegetables is a most active item in the scientific work of the Department. Storage of agricultural products creates many problems that call for constant study.

Chemical and biological research and experimentation is mainly of an applied nature. That is, the Department does not specialize in so-called fundamental research involving the discovery of basic scientific phenomena and laws, but concentrates on the adoption of known processes and the application of such processes to specific aims. Some discoveries bordering on fundamental research, however, are occasionally made, and it is also found necessary to extend to some degree into the basic field where certain information is lacking in applied science.

Agricultural research, particularly in plant science, must be decentralized to a great extent for most problems must be studied where they occur. Apart from the value to farmers of having a local source of information, the experimental farms and science laboratories are widely distributed because the work can be done in no other way. In addition to the headquarters of the Experimental Farms Service at Ottawa, work is carried on at 28 branch experimental farms and 20 substations. Experimental work of local application is done at 162 illustration stations, 54 district substations and 11 fox and mink illustration stations. The work of the Science Service, centralized at Ottawa, is also augmented by that of about 100 laboratories located throughout the country.

In the field of economic research, studies in farm management, land utilization, marketing and farm-family living are undertaken in all parts of the country. The scope of the scientific and experimental work of the Department is revealed when it is realized that there is no plant or animal in Canada that is not susceptible to damage by disease caused by bacteria, fungi or viruses, or subject to attacks by insects or, in the case of animals, by internal parasites.

Subsection 3.—Protection and Grading

Unlike manufactured articles, even close scrutiny of most agricultural products is no clue to their purity as food, or to their value to the farmer for further production. Obviously, products that are eventually used as food must be pure and healthful and must come up to standards of quality established for them. On the other hand, if agriculture is to be conducted on a sound basis, the supplies farmers buy—seeds, feeds, fertilizers and pesticides—must also carry some guarantee that they will be as represented. Much of the research and experimental work would be of no avail if legislation were not provided to see that the end-product of such work was satisfactory. In addition, Canada's live stock, crops and trees must be protected from diseases that might be introduced with importations or that might originate in Canada.

These protective and grading services are a most important part of the work of the Department of Agriculture. They come under two sections, the Production Service and the Marketing Service, and the necessary authority is gained from about 20 Acts or their regulations. Generally, the protective features and the grading to standards or approval of analyses of farm supplies come under the Production Service. The grading of most food products is the responsibility of the Marketing Service.

Health of Animals.—The protection of the health of Canada's live stock is a most important service. To guard against the introduction of contagious diseases from foreign lands, stringent regulations are enforced by the Health of Animals Division covering the importation of live stock, live-stock products and even packing material and litter. Provision is also made for the control or eradication of animal diseases developing within Canada. Programs directed at the eventual eradication of such diseases as bovine tuberculosis and brucellosis are a continuing part of the work. The Division is responsible for the inspection of animals slaughtered for food, and post-mortem examination is made of all carcasses in the course of slaughter and dressing before the meat is approved for human consumption. Sanitary conditions in packing plants and slaughter houses come under review and all canned meats must meet high standards of processing to qualify as food.

Protection of Supplies.—The Plant Products Division, in co-operation with the provinces and other agencies, is concerned primarily with the administration of Acts respecting feeding stuffs, fertilizers, pesticides, hay and straw, fibre flax and binder twine, and the production of seed. The inspection services of the Division have three main functions: (1) to enforce the Acts that regulate the sale of the agricultural supplies; (2) to provide, as required, such services as seed-crop inspection and the sealing of seed produced from inspected and other approved crops; (3) to co-operate with provincial governments and other agencies in promoting and improving supplies of seeds, feeds, fertilizers and pesticides.

Visual inspection is of little value for most of these products and laboratory testing is necessary; the laboratory services of the Division maintain branch offices across Canada. Testing of seeds is a complex matter, for they must be tested for germination, variety, purity and freedom from weeds and other kinds of seeds before they are graded. All feeding stuffs, fertilizers and pesticides are subject to registration, and this is refused if the use of products would be dangerous, if the ingredients or analyses are unsatisfactory, or if the claims made regarding their value are incorrect or misleading.

Plant Protection.—The Division of Plant Protection functions with regard to plants and plant products much as the Health of Animals Division does with animals, and administers the Destructive Insect and Pest Act. Imported nursery stock and plant material are all subject to inspection as protection against the introduction of insects and diseases. Extensive inspection is maintained within Canada to identify, localize and exterminate dangerous enemies of crops and trees. Provision is also made for the inspection of potato crops to be used for seed, for domestic and export markets, and for the issuance of health certificates required for a wide range of plant products.

Standards and Inspection.—The Department has been steadily establishing and improving standards of quality for agricultural products for 50 years or more. This work originated in an effort to improve the quality of export commodities and has gradually extended to include many products that move in interprovincial trade. Most of the provinces have adopted these standards for enforcement within their respective areas on products marketed inside the province.

Grade standards are established and enforced for dairy products, meats, eggs and poultry, fresh and processed fruits and vegetables and seeds. Grade standards are widely recognized outside Canada and many Canadian foods and agricultural products command premium prices because of the strict quality standards maintained.

Dairy Products.—Producers, processers and consumers all derive benefits from grading and inspection services of the Dairy Products Division. Authority to carry out such services is contained in the Canada Dairy Products Act which established national standards for dairy products and regulates interprovincial and international trade. Grade names and standards have been prescribed for cheddar cheese, creamery butter and dry skimmed milk and each of these products must be graded before entering into interprovincial or international trade. Dairy products for which grade names have not been established, such as ice cream, evaporated milk and process cheese, are required to meet prescribed standards for composition, packing and marking before being exported from Canada, imported into Canada or moved from one province to another. Authority to carry on the grading and inspection of dairy products made and sold within the province of origin is derived from legislation passed by the province concerned. Nine provinces have either passed or are preparing to pass legislation concurrent with that contained in the Canada Dairy Products Act and Regulations thereunder.

Meats.—In addition to the approval of carcasses for human consumption, inspection and grading of meats is of importance. All hogs marketed at stockyards and plants are rail graded, that is, the farmer is paid on the dressed weight and quality of the carcass. Export bacon is inspected as well as other export meat and meat products. The better grades of beef are marked according to standards of Choice and Good beef, making them eligible for marketing as Red and Blue brands, respectively. Lamb carcasses are graded on an optional basis and wool is inspected and graded in some 26 registered wool warehouses.

Eggs and Poultry.—Registered egg-grading stations are the basic units in the grading and packing of eggs; registered poultry-processing and eviscerating stations are the basic units in the processing, eviscerating, grading and packing of poultry; and registered egg-breaking stations are the basic units in the processing, grading and packing of frozen egg products. There are 1,280 egg-grading stations, 290 processing and eviscerating stations and 37 egg-breaking stations. Over the last few years because of a rapidly increasing demand for eviscerated poultry the quantity processed in registered processing and eviscerating plants increased—from approximately 4,000,000 lb. in 1950 to about 26,000,000 lb. in 1953.

Inspection of eggs, poultry and frozen egg products is compulsory on all sizable quantities intended for export. Inspection is compulsory for interprovincial shipments of poultry of 10,000 lb. or over. These products are also check-inspected periodically for grade when offered for wholesale and retail sale. The sale of eggs by grade, at retail, is compulsory throughout Canada, and the sale of poultry by grade, at retail, is compulsory in many of the larger consuming centres.

Fresh Fruits and Vegetables.—Grades are established for all principal fruits and vegetables produced in Canada. Practically all products for which grades are established must be inspected and certified if for shipment out of Canada. In addition, inspection and certification is compulsory on specified products if produced in certain provinces and shipped to another province. To provide this service, mostly seasonal in nature, a staff of inspectors is maintained throughout the principal producing areas across Canada. In the larger distributing centres an inspection staff is maintained to administer grading, packaging and marking regulations at the wholesale and retail level, to collect and compile market statistics and to provide, on request, a commercial inspection service covering the quality or condition of produce received by the wholesaler. The shippers, brokers, commission houses and wholesalers dealing in fruits and vegetables in interprovincial, export or import trade must be licensed and are subject to established regulations.

Processed Fruits and Vegetables.—When special regulations covering canned fruits and vegetables were established under the Meat and Canned Foods Act in 1907, Canada became the first country to have any such legislation. Regulations under the Meat and Canned Foods Act now establish grades for practically all canned, frozen or dehydrated fruits and vegetables as well as for jams. Sanitary regulations are also established and are enforced by a staff of inspectors who provide an inspection service covering interprovincial, export or import movement of processed fruits and vegetables. This movement constitutes about 98 p.c. of the entire industry in Canada the sales value of which now amounts to approximately $250,000,000 as compared with $20,000,000 in 1919. Although no grades are established in the regulations, the processing and packing of such products as pickles, olives, vegetable soups, etc., is also supervised and controlled. About 560 processing plants of one kind or another operate under a Certificate of Registration issued by the Department of Agriculture.

Honey.—Regulations are established for the classifying, grading and marking of all honey moving in interprovincial or export trade. Inspection is compulsory on honey being shipped out of Canada and administrative inspections for class and grade are made at the wholesale and retail levels on the domestic market. Interprovincial and export shippers and packers of pasteurized honey must be registered with the Department of Agriculture.

Maple Products.—Regulations are established for the prohibition of adulteration of maple products, for inspection and analysis, for proper identification of maple products and of 'colourable imitations' and for the licensing of manufacturers or packers and of all sugar-bush operators operating in the interprovincial or export market. To enforce the regulations, periodic inspection is made of the manufacturing plants, markets, stores and restaurants.

Subsection 4.—Canada's Relationship with FAO

Canada continues its active co-operation in the work of the Food and Agriculture Organization of the United Nations (FAO). At the Seventh Session of the Conference, held at Rome in December 1953, a new Director General, Dr. P. V. Cardon of the United States, who has been with the organization since its early days, was appointed to succeed Mr. Norris E. Dodd. Dr. G. S. H. Barton, formerly Deputy Minister of Agriculture for Canada, was re-elected to the seven-member Co-ordinating Committee which advises the Director. Canadian representatives were also elected to the Council, which meets at least twice a year, and to the Committee on Commodity Problems. Seventy-one nations are now members of the Organization.

The organization and objectives of FAO have been explained in earlier editions of the Year Book. In short, the chief aims are: to help nations raise their standard of living; to improve nutrition of the people of all countries; to increase the efficiency of farming, forestry and fisheries; and through all these means to widen the opportunities of all people for productive work.

FAO does not have the funds or authority to buy and distribute food, supply fertilizers and farm machinery, or build and staff laboratories. It works in three effective ways in assisting member nations: by over-all statistical study of world food supplies and requirements and by supplying information requested by member nations; by sending experts to work with scientists and technicians of member governments who ask for help—special missions are sent to countries requesting them; and by making definite recommendations for concerted action and providing a means by which nations may work together on programs and carry them out.

Technical assistance embraces numerous problems of agriculture, simple as well as complex. In many backward countries, for example, the introduction of scythes (to replace crudely made sickles), hoes and other simple hand tools has meant more food for those who must depend almost entirely on tilling the land for their needs. As the farmers become adept with these tools, more advanced equipment can be introduced. In more advanced countries the problems are different and advice and assistance is sought on practically all phases of the industry, from the soil itself to the storing, marketing and financing of the finished product.

Because the Organization is essentially international, the Headquarters staff at Rome is cosmopolitan. For the same reason a technical mission may be composed of officials drawn from different member countries, but all are experts in the particular branch of agriculture upon which they are asked to advise. A number of Canadians are included on FAO Headquarters staff and during 1954 Canadian specialists served in Afghanistan, Ceylon, Chile, Egypt, Ethiopia, Finland, Haiti, India, Iraq, Korea, Malaya and Pakistan. Canadian universities and federal and provincial government departments have assisted in FAO's Expanded Technical Assistance Program by training a number of Fellows and scholars.

Section 2.—Provincial Governments in Relation to Agriculture*

Subsection 1.—Agricultural Services

Newfoundland.—Government agricultural services in Newfoundland are operated by the Agricultural Division of the Department of Mines and Resources.

The Division maintains an extension service and encourages agricultural development by the payment of bonuses on the purchase of pure-bred sires and for the clearing of land; by assistance with agricultural exhibitions and the payment of a subsidy on agricultural limestone. Each year several scholarships are awarded young men enabling them to take a two-year degree course in agriculture. Government policy relating to the clearing of land for agricultural purposes, with government-owned tractors, is administered by the Land Development Division of the Department.

Prince Edward Island.—The Department of Agriculture is presided over by a Minister assisted by a Deputy Minister, a Dairy Superintendent and Assistant Dairy Superintendent, a Pathologist, a Director of Veterinary Services, five subsidized practicing Veterinarians, a Soil Analysis Assistant, a Poultry Director, an Agronomist, three Field Representatives, a Director and Assistant Director and two extension workers of Women's Institutes.

Nova Scotia.—The Nova Scotia Advisory Committee on Agricultural Services was established a few years ago to further the effective prosecution, within the Province, of agricultural policies and projects of the Federal and the Provincial Departments of Agriculture.

The main purpose and function of the Committee, which meets quarterly, is to determine ways and means by which the purposes of both Departments of Agriculture may best be served, and how the work of those Departments may be co-ordinated and directed through integrated agricultural policies and with a minimum duplication of services.

Every effort is made by the Department of Agriculture and Marketing to "help the people to help themselves" through strengthening member-interest in such organizations as the Nova Scotia Federation of Agriculture, Nova Scotia Fruit Growers' Association, through various agricultural co-operative organizations, credit unions and several producer-organizations.

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* Information supplied by the agricultural authorities of the various provinces.

New Brunswick.—Provincial Government policy concerning agriculture in New Brunswick is directed by the Department of Agriculture. This Department has as its head the Minister of Agriculture who is assisted by a Deputy Minister and the Directors of the following services: extension, live stock, dairy, veterinary, poultry, horticulture, field husbandry, soils and crops, plant protection and promotion, agricultural engineering, home economics, Credit Union Co-operative Association, agricultural education, apiculture, and agricultural societies.

Quebec.—The Department of Agriculture of Quebec comprises eleven services: rural education, rural economy, extension, animal husbandry, horticulture, field husbandry, information and research, home economics, animal health, rural engineering and the secretariat. Each service is divided into sections dealing with particular problems.

The Department also includes many other special organizations such as the Research Council, the Dairy Industry Commission, the Dairy School of St. Hyacinthe, the Provincial Extension Farm (Deschambault), the Fur Bearing Animals Extension Farm (St. Louis de Courville). The Farm Credit Bureau, the Quebec Sugar Refinery (St. Hilaire) and the Veterinary College (St. Hyacinthe) are also under the authority of the Minister of Agriculture. The Office of Rural Electrification is connected with the Provincial Executive Council.

The annual competition for the Agricultural Merit Order, organized in 1890, is held alternately in each of five regions. Each contest lasts five years and covers the different farm productions; the main objective is an economical increase in crop and cattle yields. County Farm Improvement Contests have been conducted for more than twenty years and are still very popular. Over 6,000 competitors have already benefited from these contests which promote better methods of culture designed to increase farm income. In 1953-54, another group of 200 farmers registered for these competitions.

Soil-improvement policies include large drainage projects carried out by the Department and smaller projects carried out by groups of farmers with government help. In the past five years, 500,000 acres of land have been improved or reclaimed and 400,000 acres of underground drainage have been completed. In 1954, 19,500 farmers will benefit from the work of this Service.

Various forms of assistance are offered towards improvement of crops and live stock. An artificial insemination station operates at St. Hyacinthe for the benefit of 34 breeders' clubs, and plant-breeding stations for cereal and forage crops, vegetables and small fruits are maintained in a number of localities. Trained specialists are employed in the work of controlling plant and animal pests and diseases; the main laboratories are situated at Quebec City and field laboratories are located in different districts or in schools.

Agricultural co-operation is widespread in Quebec. There are 650 co-operatives with 70,000 members and 90 agricultural societies with 29,000 members to serve local interests and organize county exhibitions. There are also 850 Cercles de Fermières (Women's Institutes) in operation with a membership of 48,000; 500 farmers' clubs with a membership of 23,000, and 140 junior farmer clubs where 3,450 young boys and girls are working on numerous practical agricultural projects.

The Farm Credit Bureau was established in 1936. During 18 years of operation, the Bureau has placed at the disposal of 36,000 farmers of Quebec a sum of $106,000,000 and has established 14,500 young men on farms.

Ontario.—The Ontario Department of Agriculture provides financial assistance and administrative services to agriculture through its Head Office, 11 branches, three experimental farms, and through research and extension work carried on at the four educational institutions under its administration. In addition to general administration, the Head Office administers the policies providing assistance to farmers and settlers in northern Ontario in connection with land breaking and clearing, and with improving farms and live stock. (1) The Live Stock Branch promotes live-stock improvement policies, licenses and examines stallions and gives support to pure-bred live-stock associations; (2) the Field Crops Branch assists in the development of good cultural practices and promotes the use of improved strains of seed, the improvement of pastures, and the eradication of weeds; (3) the Dairy Branch provides an inspection, instruction and supervision service to all dairy factories and promotes the production of clean milk on farms; (4) the Farm Economics Branch conducts cost studies on agricultural production in co-operation with agricultural organizations; (5) the Fruit Branch enforces fruit and vegetable regulations, provides information to growers, and administers the Co-operative Marketing Loans Act; (6) the Co-operation and Markets Branch administers the Farm Products Control Act, the Ontario Food Terminal Act and the Farm Products Containers Act; (7) the Milk Control Board, under the Milk Control Act, regulates and supervises the marketing of fluid milk; (8) the Agricultural and Horticultural Societies Branch gives assistance to agricultural and horticultural fairs and exhibitions, plowing matches and other competitions, and administers the Community Centres Act; (9) the Agricultural Representatives Branch carries on an educational and extension service through agricultural representatives located in all counties and districts and gives direction to 4-H Club work and the Ontario Junior Farmers' Association; (10) the Women's Institute Branch and Home Economics Service gives leadership and direction to organized activities of rural women; (11) the Statistics and Publications Branch, in co-operation with the Dominion Bureau of Statistics, provides a crop-reporting service and gathers and disseminates data on crops, live stock and dairy products. The Horticultural Experiment Station at Vineland, the Western Ontario Experimental Farm and Agricultural School at Ridgetown, the Demonstration Farm at New Liskeard, the Kemptville Agricultural School, the Ontario Agricultural College and the Ontario Veterinary College at Guelph, all under the administration of the Department, provide research and extension services to Ontario agriculture.

Manitoba.—The Department of Agriculture serves Manitoba through the following branches: agricultural extension; live stock; dairy; soils and crops; agricultural publications and statistics; weeds administration; co-operative services; and the provincial veterinary laboratory.

The Extension Service deals with agronomy, horticulture, poultry, agricultural engineering, beekeeping, 4-H Clubs and women's work, and has specialists devoting their attention to these subjects. Meetings, field days and short courses are held. There are 31 agricultural representatives located throughout the Province, each representative serving from one to five municipalities. Six home economists serve designated areas.

The Live Stock Branch administers the Animal Husbandry Act, develops and administers policies that encourage the improvement and production of live stock, and works in close co-operation with the Veterinary Laboratory Service and the Federal Health of Animals Division in the control of live-stock diseases.

The Dairy Branch administers the Dairy Act, supervises the grading of cream, inspects creameries and cheese factories, gives instruction in cheese- and butter-making, issues licences to makers of dairy products and to cream graders and conducts a dairy-cost study among milk producers. Extension activities include addressing meetings and preparing articles and leaflets on dairy-farm problems.

The Soils and Crops Branch deals with grain and forage crops conservation and fertility and provides liaison between the Province of Manitoba and the Government of Canada in regard to PFRA projects. The branch develops and administers policies that encourage good field-crop husbandry and conservation practices.

The Agricultural Publications and Statistics Branch publishes and distributes, annually, approximately 100,000 bulletins, circulars, posters, leaflets, etc.

The Weeds Administration Branch directs the activities of 18 municipal weed-control units comprising 70 rural municipalities engaged in eradicating deep-rooted, persistent perennial weeds; supervises weed demonstrations; investigates weed problems; conducts weed surveys; and prepares weed literature, radio addresses, articles, pictures, mounted weed specimens, etc.

The Co-operative Services Branch takes care of the registration and supervision of co-operatives and credit unions and the administration of the Acts governing them. The Branch also collects and compiles statistics on co-operative activity throughout the Province. The Director is Secretary of the Co-operative Promotion Board.

The Veterinary Laboratory operates a diagnostic laboratory for animal diseases, the services of which are available to veterinarians and live-stock owners.

Saskatchewan.—The Saskatchewan Department of Agriculture is organized as follows. (1) The Administration Branch includes the Accounting Division handling staff records, accounts and vouchers and mail assembly; the Agricultural Records Division, handling records particularly of agricultural and horticultural societies; the Statistics Division, which, in co-operation with the Dominion Bureau of Statistics, collects data on crop conditions, production, marketings and income; and the Radio and Information Division which broadcasts farm information daily over seven private stations. (2) The Agricultural Representative Service has a field staff of 37 agricultural representatives, four area supervisors and specialists in farm mechanics and visual aids. The Farm Labour Division co-ordinates farm labour requirements and services with federal agencies. The Service provides an extension field staff for all Branches of the Department as well as for the other agencies operating within the Co-operative Agricultural Extension Program. Agricultural representatives are active in all federal, provincial and university farm services. In farm labour matters, co-operation is maintained with the federal Department of Labour and the National Employment Service in directing annual movements of farm labour in and out of the Province. Agricultural representatives work through Agricultural Conservation and Improvement Committees in each rural municipality and local improvement district to supply the farmer with the scientific and practical information necessary for improvement in agriculture. Agricultural committees are instrumental in studying local farm problems and in initiating agricultural improvement programs. These programs are encouraged through an Earned Assistance Program under which the Department pays one-half the costs of local group development projects. (3) The Animal Industry Branch includes four divisions. The Dairy Division administers dairy herd improvement programs and assists producers with management and production problems; inspects and licenses dairy manufacturing and frozen-food locker plants; and administers dairy, locker-plant and margarine legislation. The Livestock Division encourages the use of suitable animals for breeding purposes by the establishment of pure-bred sire areas and by assistance in the purchase and distribution of stallions, bulls, boars and rams. It registers brands, licenses live-stock dealers and agents and promotes programs on insect control, feeding and management. The Poultry Division maintains flock-testing and turkey-grading services; administers an approved hatchery policy, licenses produce dealers and poultry buyers, hatcheries and hatchery agents. It also assists with poultry shows and field days and otherwise promotes flock improvement. The Veterinary Division assists students in veterinary science under a scholarship plan, administers disease-testing and vaccination programs and co-operates with Federal Government officials and local veterinarians in disease prevention and control. (4) The Conservation and Development Branch is responsible for the engineering services extended by the Department, for irrigation development usually in co-operation with the Federal Government, and for drainage programs and projects. Reclamation of land by drainage, development of misused land and under-utilized land, and construction of provincial community pastures all come within its jurisdiction. The Branch administers the Farm Implement Act and provides engineering assistance to conservation and development areas, water users' districts, and irrigation districts in connection with water-control projects. (5) The Lands Branch administers all Crown, school and Land Utilization Board lands except forest reserves and parks in the settled area of the Province; classifies it according to the use for which it is best suited; disposes of such lands under long-term leases; collects rental for land under disposition; secures land control for land-utilization projects, including the purchase and exchange of lands and Crown lands; supervises new settlement projects including land improvement by the Department and by lessees and operates provincial community pastures. (6) The Plant Industry Branch organizes and administers programs for crop improvement and crop protection, and advises on seed and crop improvement, soil conservation, horticultural problems, weed control and management of irrigated land. The improvement of grassland is promoted through a forage crop program. The Seed Plant Division carries on custom cleaning of forage seeds and registered cereals. The Apiary Division advises on beekeeping and honey production, and carries on continuous inspection for American foul brood and supervises grading.

Alberta.—The Alberta Department of Agriculture is organized as follows. (1) The Field Crops Branch deals with all matters that pertain to the utilization of soil and the production of crops. A Commissioner of Field Crops and four Supervisors administer programs and policies relating to crop improvement, soil conservation and weed control, crop protection and pest control, and horticulture. Agricultural Service Boards of municipalities carry out programs and administer regulations for which the municipality is made responsible by provincial legislation; the Department is represented on each Board. (2) The Live Stock Branch aids in maintaining the quality of herds and flocks by assisting farmers in securing pure-bred herd sires and by maintaining an artificial insemination laboratory. The work of the Branch includes the supervision of live-stock feeder associations and the administration of legislation relating to stock inspection, brands, domestic animals and the sale of horned cattle. (3) The Dairy Branch administers the Dairymen's Act and the Frozen Food Locker Act. Grading and purchasing of raw produce by all dairy plants are under regulation, as well as standards of construction, manufacture, processing, sanitation and temperature control for dairies and frozen-food lockers. A regular cow-testing service is available to dairy producers and the Branch laboratory provides facilities for chemical and bacteriological analyses needed for industrial directives. Yearly cost studies and dairy-farm management services are operating in the principal milk-producing areas. (4) The Poultry Branch carries on programs for the improvement of poultry husbandry, supervises flock approval for the control of pullorum disease, maintains a practical poultry-breeding plant for the distribution of breeding stock and issues all hatchery, wholesale, first receiver and truck licences for the handling of poultry products. (5) The Veterinary Services Branch provides the scientific diagnosis of live-stock and poultry diseases through its laboratory; conducts investigations of disease conditions; gives lectures in veterinary science at the University of Alberta, Schools of Agriculture, and a large number of meetings; and actively promotes government policies aimed at reducing disease losses throughout the Province. (6) The Apiculture Branch administers the Bee Diseases Act which requires the registration of all beekeepers and the maintenance of an inspection service; it also administers the regulations on honey grading. The Branch carries on a considerable amount of general educational work. (7) The Agricultural Extension Service operates 42 offices and employs the services of 45 district agriculturists and 15 district home economists. The district agriculturists work with the farmers, assisting with their problems, and with departmental policies designed to improve the standard of agricultural practices; the district home economists provide a similar service for farm women. Bulletins are prepared dealing with agricultural and home economics topics and weekly farm notes are prepared for distribution to the press. The Branch is responsible for the supervision of agricultural societies and, in co-operation with the Federal Department of Labour, is concerned with recruitment and placement of farm labour. (8) The Fur Farm Branch administers the licensing and exporting of live animals and pelts, assists fur farmers with problems pertaining to care and management and stock improvement, and operates a vaccine distemper assistance plan to control disease. (9) Schools of agriculture and home economics are operated at Olds, Vermilion and Fairview (*see* p. 390). (10) A Radio and Information Branch, established on Apr. 1, 1953, provides a radio program consisting of five broadcasts a week over six Alberta stations.

British Columbia.—The Department of Agriculture has four main divisions. (1) The Administrative Division is responsible for the general direction of agricultural policies, administration of legislation affecting agriculture, supervision of extension programs, collection of agricultural statistics, compilation of reports and publications, preparation of material for agricultural exhibitions, supervision of farmers' and women's institutes, as well as the carrying out of soil surveys in various sections of the Province. (2) The Animal Industry Division consists of general live-stock, veterinary, dairy and poultry branches and supervises the promotion and improvement of animal production, fur farms, brand inspection, inspection of beef grading, control of contagious diseases of animals, eradication of insect pests detrimental to live stock, and field extension connected with animal nutritional work. (3) The Plant Industry Division includes horticulture, field-crop, plant pathology, entomology and apiculture branches and supervises fruit, vegetable and seed production and surveys dealing with orchards, small fruits, flowering bulbs and greenhouse areas; also the suppression of insect pests, plant disease inspection with control of noxious weeds and general promotion of crop production. In addition, there are field officials in 12 of the principal fruit and vegetable producing areas who undertake extension work on behalf of field crop, fruit and vegetable producers. (4) The Agricultural Development and Extension Division includes field-extension work through the district agriculturist service, clearing agricultural lands for production, agricultural engineering, farm labour supply, and junior club projects. Extension Division officials of the Department are located in 32 agricultural centres throughout the Province.

Subsection 2.—Agricultural Colleges and Schools

All provinces, with the exception of Newfoundland, provide facilities for training in agricultural science at university level. Such colleges are administered by either the Department of Agriculture or the Department of Education of the respective provinces.

Prince Edward Island.—The two-year course in scientific agriculture offered at Prince of Wales College is designed for students preparing to enter third year at Macdonald College, Que. The course is started every second year.

In the Vocational School, the short courses offered in agriculture are planned to provide not only knowledge and skill but to develop in the student a sense of the dignity and importance of agriculture as a vocation and an understanding of the importance of the industry to the Province.

Nova Scotia.—Nova Scotia Agricultural College at Truro offers three courses: the first two years of a course leading to the degree of Bachelor of Science in Agriculture; a two-year course in general agriculture; and a two-year course in vocational agriculture. In addition, the College assists in conducting short courses at various provincial centres, supports Folk Schools and gives leadership and direction to the 4-H Club organization. Tuition is free for students of the Maritime Provinces.

New Brunswick.—The Province's four Agricultural Schools are located at Woodstock, Fredericton, St. Joseph and Edmundston. Two-year agricultural courses extending over five months each year are offered at St. Joseph, Fredericton and Edmundston and at Woodstock a three-year course is conducted. The curriculum includes training in all phases of agriculture, shop and general academic work. Home economics courses of 10 months are offered at Woodstock and St. Joseph in conjunction with the agricultural courses.

Quebec.—Courses in agricultural schools in the Province include a four-year university course leading to a degree of Bachelor of Science in Agriculture at the following universities: Laval Faculty of Agriculture (Ste. Anne de la Pocatière); L'Institut Agricole d'Oka (affiliated with the University of Montreal); and McGill Faculty of Agriculture (Macdonald College). At the Provincial Veterinary School (St. Hyacinthe), affiliated with the University of Montreal, a four-year course is offered leading to a degree of doctor in veterinary medicine. There are also nine secondary agricultural schools throughout the Province, 10 regional schools and six orphanages offering courses in agriculture. More than 1,500 students, the great majority of whom are sons of farmers, attend these intermediate and regional schools of agriculture, and in the orphanages 200 pupils follow practical agricultural courses. A farm is always annexed to the school for practical training and specialists give instruction on the maple-sugar industry, farm mechanics, co-operatives, plant protection, veterinary hygiene, aviculture, marketing and silviculture. School co-operatives and clubs are organized and directed by the pupils, under the supervision of their professors. Household science training for the daughters of farmers and settlers is given in five of these schools. During the summer of 1953 nearly 400 girls attended these courses which extend over the four summer months of two consecutive years.

Ontario.—The two-year course of the Ontario Agricultural College for the Associate Diploma in Agriculture is planned to provide basic training of personnel in agriculture. Young persons interested in making agriculture their vocation study the application of science to agricultural practice and also receive training for rural citizenship.

The four-year course for the degree of Bachelor of Science in Agriculture is designed for fundamental education in the science of agriculture. A sound training is provided for farming as a profession, for entrance into government extension and allied agricultural services, agricultural industry, teaching, and for those who wish to proceed to graduate studies for the Master's and Doctorate degrees.

Graduate courses are also offered leading to the degree of Master of Science in Agriculture. Graduate students are enrolled in a department or departments of the Ontario Agricultural College conjointly with a department or departments of the University of Toronto for advanced courses of study and training in experimentation and scientific investigation. M.S.A. graduates may go into teaching, research, or further post-graduate study for a Doctorate degree.

The Ontario Veterinary College offers a course leading to the degree of Doctor of Veterinary Medicine. The course is five years in length with two four-month periods of regulated summer internship. In addition to its function as a teaching institution, the College is a centre for research into the diseases of animals and provides free consultation for veterinary surgeons in practice as well as extension services in the interests of the live-stock industry.

The Kemptville Agricultural School offers diploma courses in the following subjects:—

(1) A two-year diploma course in agriculture (two terms of six months each) giving practical training in modern farm methods designed primarily for young people who wish to farm but serving also as a preparation for many other occupations closely connected with agriculture. Stress is laid on the development of community leadership. A 300-acre school farm and residence life are features of the Kemptville Agricultural School. (2) A one-year diploma course (six-month session) leading to a diploma in homemaking and qualification for the less exacting positions in fields of home economics. (3) A two-year diploma course (two terms of six months each) for girls wishing to prepare for positions in the tourist trade, food services, sewing centres and other fields of home economics. (4) A three-month winter course for all dairy apprentices leading to the Dairy School Diploma required for certified buttermakers, cheesemakers and operators of dairy manufacturing plants.

Western Ontario Agricultural School offers a practical course intended for young men who propose to return to farming. It consists of two winter courses of 20 weeks each, starting late in October and ending late in March. All subjects relating to agriculture are included in the curriculum.

Manitoba.—The Faculty of Agriculture and Home Economics of the University of Manitoba offers degree courses in agriculture and home economics as well as a two-year, sub-collegiate diploma course in agriculture. Practical one-season courses in agriculture and homemaking are also given at the Brandon Agricultural and Homemaking School. Graduates in agriculture from this School are admitted to the second year of the diploma course at the University.

Saskatchewan.—The University of Saskatchewan offers a degree course in agriculture for those who intend to teach agriculture in secondary schools or colleges, to engage in research or administrative work, or to farm. Specialization is possible with permission of the faculty. Provision is made for combined courses in agriculture and arts or commerce. Post-graduate courses are available.

The Saskatchewan School of Agriculture offers a practical course intended to give sound training in farm practice and also to train young men to become rural leaders.

All courses leading to a degree in home economics require four years. The prescribed course of studies for the first two years is the same for all pupils but in the third and fourth years four types are offered: (1) for teachers, (2) for dietitians, (3) general, and (4) additional specializations. A combined course leading to a degree in arts and science and in home economics requires at least five years.

Alberta.—The University of Alberta offers a four-year degree course in agriculture to students with senior matriculation or its equivalent. Students may elect a general program or major in a wide range of special courses in the fields of animal science, economics, entomology, dairying, plant science, and soils. Graduate work at the Master level is offered in all departments and at the Doctorate level in some.

The Alberta Schools of Agriculture and Home Economics, located at Olds, Vermilion and Fairview, offer practical two-year courses in agriculture and homemaking. The purpose of the schools is to train young men for farming and young women for homemaking.

The regular course in agriculture and in home economics requires two terms, each extending from late October to early April. A special two-in-one course of one term is offered to students who have completed 70 high-school credits. These schools accept students who have reached 16 years of age. There are no academic requirements for regular students, although Grade VIII is desirable, and no tuition fees for residents of Alberta. Living accommodation is provided in modern dormitories with dining-room, auditorium and gymnasium facilities.

During the summer months the schools are used for agricultural meetings and conferences of organizations that are connected with agriculture. During the month of July, leadership courses, 4-H club gatherings, farm camps and other events keep the facilities in constant operation.

British Columbia.—The Faculty of Agriculture at the University of British Columbia offers a four-year general degree course in agriculture and a five-year honours course. In the honours course there are 15 different fields in which a student may specialize. Work is also offered by the Faculty of Agriculture in the Faculty of Graduate Studies through which a student may proceed to the degrees of Master of Science in Agriculture and Master of Science; in a limited number of fields, work is offered at the Doctorate level. The Faculty also offers a one-year or two-year diploma course in occupational agriculture, adaptable to the needs of individual students.

In co-operation with various branches of the provincial Department of Agriculture and under the auspices of the University Extension Department, the Faculty of Agriculture also offers a number of short courses which vary in length from one or two days to several weeks.

Section 3.—Agricultural Irrigation and Land Conservation

Subsection 1.—Federal Projects*

PRAIRIE FARM REHABILITATION ACT

The Prairie Farm Rehabilitation Act is a rehabilitation program conceived by Parliament in 1935 to meet the problems of drought and soil drifting adversely affecting agriculture on the Canadian prairies. Existing agencies of the Government of Canada were assisted, with PFRA funds, to expand their activities in providing leadership in the immediate drought problems. In particular, cultural investigations were carried out by the Experimental Farms Service to ensure the most economic use of the limited supply of soil moisture for crop production and the prevention of soil drifting farm lands that were a menace to surrounding good land. A program of water conservation to meet immediate needs was also initiated in 1935. Other services, such as the Economics Division, were assisted where special knowledge was required for rehabilitation measures.

The major activities of the PFRA Administration, with Headquarters at Regina, Sask., include the construction, for the Government of Canada, of all projects concerned with water conservation and land utilization in the Prairie Provinces. The five principal phases of investigational study in the field of engineering include surveys (exploration), soil mechanics, drainage, hydrology and design. These studies are undertaken by PFRA to gather the fundamental groundwork of technical and other basic information that is required before construction of any project is undertaken.

Water Conservation

Individual and Community Projects.—PFRA provides engineering and financial assistance to farmers in the construction of water conservation works within drought areas of the three Prairie Provinces as a rehabilitation measure. The amount of financial assistance awarded is largely dependent upon the type and size of the project contemplated. At all times PFRA policy, with respect to assistance provided, is to assist farmers to rehabilitate themselves. Authority to proceed with construction is first secured through the respective provincial water rights departments. Water conservation projects in this category are classified either as "individual farm projects" or as "community projects" undertaken by a group of farmers.

Individual Farm Projects.—During 19 years of operation, PFRA has provided assistance to farmers to construct 50,277 individual farm projects in the form of dugouts and small dams, many of which are suitable for irrigation. The objective is to provide adequate water-storage facilities where water shortages exist, and to assure dependable water supplies through irrigation for domestic requirements, for stock-watering and for the production of live-stock feed.

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* Prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, by G. J. Matte, Associate Director of Rehabilitation.

The construction of these projects has extended the benefits of water to all parts of the dry area: as a result, a much larger number of farmers have been rehabilitated than would have been possible through the construction of large schemes on well-defined watersheds and without the movement of settlers from their present holdings. The maintenance of valuable live-stock herds has been secured by assuring dependable water supplies on farm stock-watering projects and through the development of 90,000 acres of irrigated land on small irrigation schemes.

Community Projects.—The development of community projects is necessarily confined within the narrow reaches of well-defined watersheds where sufficient water resources are available. Where a group of farmers organizes a water-users' association or a rural municipality provides leadership in an irrigation or water-storage project, PFRA co-operates with the local body. The usual procedure is for the Government of Canada to assume the capital cost of storage and connecting works and the provincial body to assume the responsibility for the distribution of water to the land or along the watershed. The local body also undertakes maintenance and operation.

To Mar. 31, 1954, PFRA provided the necessary assistance to construct 292 community projects, the majority of which are located on six watersheds originating in the three Prairie Provinces. The purpose of these projects is to conserve the surplus spring runoff water to supplement short supply later in the year. By maintaining stream flows, farmers are assured of dependable water supplies for live stock and for irrigation use. In addition, community projects provide homes for farmers moved from submarginal areas to where they can be assured a livelihood.

PFRA's responsibility for the development of large community irrigation schemes terminates with the construction of primary reservoirs and connecting canals. In special cases where the need for early returns to farmers proved imminent, PFRA has assisted further in the development of the irrigable land and has maintained a constant surveillance of the project's operations and progress. At times, agreement has been reached between PFRA and the provincial government concerned whereby PFRA provides engineering and financial assistance to construct primary works and the province agrees to assist with the development of the irrigable area. Such an agreement is in effect in connection with sections of the Swift Current Irrigation project being developed in Saskatchewan.

Major Irrigation Projects.—During recent years PFRA has administered special votes by Parliament for the construction of water conservation and development projects that involve large expenditures of money. These undertakings have extended PFRA administration beyond the boundaries of the PFRA area in the three Prairie Provinces into British Columbia.

St. Mary Irrigation Project.—The St. Mary Irrigation project has been undertaken by agreement between the Government of Canada and the Province of Alberta. The Government of Canada has agreed to construct the main supply reservoirs and connecting works. The Province of Alberta has undertaken the responsibility for construction of the auxiliary reservoirs and distribution system from the main works to the land (*see also* p. 398).

The St. Mary River System is by far the most important irrigation project undertaken in Canada and, when completed, will irrigate an area of approximately 510,000 acres. Construction of the St. Mary Dam, key structure on the whole project, was completed in 1951. It stands 195 feet high and is 2,536 feet wide, and creates a reservoir capable of storing 320,000 acre-feet of water. Approximately 200 miles of main canal have been built and 10,000 acres of land have been developed, together with over 100 miles of the distribution canal system. Further lands are under development.

South Saskatchewan River Development.—This development in central Saskatchewan is a proposed multipurpose project to be used for developing power and irrigation, the irrigable area lying between the town of Elbow and the city of Saskatoon. The key structure on the project will be a dam on the South Saskatchewan River located at a point midway between the towns of Outlook and Elbow.

The plan is to stabilize agriculture in the south-central area of the Province where prolonged droughts have created serious economic problems for over 50,000 farmers. Full use will be made of the river's control, power, urban water supply and recreational benefits.

Bow River Irrigation Project.—The Bow River project was purchased by the Government of Canada in 1950 from the Canada Land and Irrigation Company, a private British interest. Development of this project will ensure water to 57,000 acres of land at present irrigated and will bring an additional 180,000 acres "under the ditch". Construction activities so far have been mainly the repair and enlargement of old structures to meet new and increased demands. Twelve thousand acres of new land in the Hays district of the Bow River irrigation project were prepared for settlement in 1951. A complete irrigation distribution system was installed in the area (*see also* p. 398).

Red Deer Irrigation Project.—The proposed Red Deer River development concerns the irrigation of an estimated 400,000 acres of land located in the east-central part of Alberta. The project will consist of a dam on the Red Deer River at Ardley and about 100 miles of main canal to two main reservoirs—Craig Lake and Hamilton Lake. The dam will contain power installations to produce power for pumping and also for sale commercially. An estimated 20,000,000 kwh. of water power will be available for sale when power is fully developed. Development plans are under preparation.

Irrigation Development in British Columbia.—Irrigation development in British Columbia has been undertaken in connection with the Veterans' Land Act and at the request of the British Columbia Government. Three projects (the Chase irrigation project and the Johnstone Western Canada ranching projects No. 1 and No. 2) have been completed within the South Thompson Valley area. On these projects, 809 acres of land have been developed for irrigation for the benefit of approximately 40 veterans of World War II.

In the Okanagan Valley three new projects have been completed (the Westbank irrigation project and the Bankhead project near Kelowna, and the Cawston Benches project located east of the town of Keremeos). The three projects irrigate 1,782 acres of land and provide locations for 170 veterans of the Second World War. The Penticton West Benches project, irrigating approximately 200 acres and accommodating 97 veterans on small holdings, was completed in 1953.

Intensive farming is practised in the Okanagan and South Thompson Valleys. The land developed for irrigation by PFRA is used mainly for the growing of small fruits and vegetables and for dairying. New projects are constantly being investigated as potential development areas.

Major Reclamation Projects.—*Riding Mountain Reclamation Project.*—Extensive investigations have been undertaken by PFRA in the Riding Mountain area at the request of the Manitoba Government. A serious flood problem exists on a number of streams flowing off the north and east slopes of Riding Mountain and Duck Mountain, causing damage to a large area of valuable agricultural land. PFRA was asked to devise and carry out a plan to relieve a land area of over 252,000 acres affected by flooding.

The cost of reclamation in the area is borne jointly by the Government of Canada and the Government of Manitoba. Construction work so far has centred mainly along Edwards and Mink Creeks in the Riding Mountain area. The work consisted of clearing and dyking stream channels and straightening the alignment of channels by building stream cutoffs and diversions. The larger portion of the work on these two streams was completed in 1951.

Stream bank erosion studies are also being continued on streams of Riding Mountain to stabilize stream banks and minimize erosion problems. It will be necessary to continue the studies for a number of years before definite results can be presented.

Saskatchewan River Reclamation Project.—Surveys and investigations were made by PFRA to determine the possibility of successfully reclaiming land for agriculture in the Pasquia area of the Saskatchewan River delta region near the town of The Pas in Manitoba. As a result, an agreement was reached on Apr. 17, 1953, between the Government of Canada and the Province of Manitoba for the construction of the necessary reclamation works to protect the area from flooding and to settle about 96,000 acres of suitable land. The Government of Canada is assuming the costs of building the main protective works, and the Province is assuming the costs of settlement, maintenance of works, and internal drainage. Half of the reclaimed land will be reserved for the resettlement of farmers from drought areas and the remainder is to be sold. Part of the proceeds from the sale of the lands will go to the Federal Government as a partial reimbursement of the costs of building the main protective works. Construction was started early in 1953; it will take three years to complete the works consisting of dykes, drains and diversion of streams.

Assiniboine River Project.—This project is being undertaken at request of the Manitoba Government to prevent flooding on the Assiniboine River, particularly between Brandon and Virden and between Portage la Prairie and Headling where thousands of acres of valuable agricultural land have been inundated repeatedly. All the studies undertaken are in conjunction with the Red River Basin investigation currently being carried out.

Several alternative plans are being investigated to divert excess water from the Assiniboine River during flood stages. Detailed study is being given to water runoff data in the Assiniboine River Drainage Basin and the possibility of building water-storage works on the headwaters of the Assiniboine River.

Lillooet Valley Reclamation Project.—The Lillooet Valley Reclamation project was undertaken upon agreement between the Government of Canada, the Government of British Columbia and the Pemberton Valley Reclamation District. This project is located in the Lillooet River Valley above and below the town of Pemberton and its objective is to protect lands now under cultivation from flooding and to reclaim additional lands by dyking and drainage. The land reclaimed amounted to 14,000 acres, which allowed farmers in the district to increase their holdings and also permitted the settlement of hundreds of additional inhabitants.

Land Utilization

In addition to cultivation and water-conservation activities, rehabilitation of drought areas involves the conversion of large tracts of land proved to be unsuitable for crop production, which had initially been cultivated to a permanent grass cover for live-stock production, and the relocation of farmers residing thereon. To this end, PFRA's Land Utilization Program has constructed 62 operating pasture units, resulting in the reclamation of 1,677,416 acres of submarginal land. During the 1953-54 construction season 25,396 additional acres were fenced and included in the pasture system.

During the year ended Mar. 31, 1954, summer grazing was provided for 110,000 head of live stock owned by 6,421 patrons living on lands adjacent to these pastures.

An extensive pasture improvement program is in effect on all pastures and is immediately initiated as soon as new areas are enclosed. This policy has more than doubled the 1938 average carrying capacity on pasture land. The three improvement policies most extensively practised in all pastures are: (1) regrassing—since 1938 approximately 180,293 acres of land in community pastures have been regrassed; (2) development of stock-watering sites—to Mar. 31, 1954, over 1,000 stock-watering dams, dugouts and wells have been constructed in community pastures; and (3) pasture management and controlled grazing.

MARITIME MARSHLANDS REHABILITATION ACT

The marshlands of Prince Edward Island, Nova Scotia and New Brunswick are among the more productive soils in Canada when protected and properly cultivated. They are composed of deposits laid down by tidal waters and are, for the most part, adjacent to the Bay of Fundy.

The initial areas were reclaimed as early as 1630 and since that time about 80,000 acres have been protected by dykes and aboiteaux. These structures prevented flooding by tide water and permitted cultivation after drainage had been carried out.

Through a variety of circumstances—loss of cattle markets, loss of hay markets and the increase in labour costs—maintenance of the protective structures was not adequately carried out and deterioration of many of the structures resulted. Because the marshlands, when protected, can play such an important role in the agricultural economy of the provinces concerned, the Government of Canada and the Provincial Governments of Nova Scotia and New Brunswick passed legislation permitting them to carry on a program of reclamation and rehabilitation of these lands. The federal Act, the Maritime Marshland Rehabilitation Act, was passed in 1948. Complementary provincial marshland reclamation Acts were passed by both Nova Scotia and New Brunswick in 1949. These Acts permitted agreements to be signed whereby the Government of Canada would construct or reconstruct the protective works, normally called dykes, aboiteaux and breakwaters, and also would assume the responsibility of maintaining these works until such time as they could be turned back to the Provinces. The Federal Government is responsible also for any engineering work in connection with the complete program. The Provinces are responsible for the organization of the marsh areas, the fresh-water drainage and acquisition of any land required. They are responsible also for the instigation and follow-up of a suitable land-use program. Owing to the small area of marshland in Prince Edward Island, no provincial legislation was considered necessary in that Province.

By Mar. 31, 1954, the Provinces had asked to have 127 areas considered for reclamation purposes. These comprised 38,588 acres of marshland in New Brunswick (including 8,058 salt or unprotected marsh), 34,102·4 acres in Nova Scotia (including 5,486·5 salt or unprotected marsh) and 275 acres in Prince Edward Island. The 72,965·4 acres of marshland in the three Provinces constitute an integral part of the estimated 404,000 acres of farm land.

By the end of the 1954 construction season, protective works of a major type had been carried out on 70 projects and 35 areas had been temporarily reconstructed.

Investigations to determine the advisability of constructing a large structure to eliminate the need for many miles of dyke and many aboiteaux were being carried out on the Annapolis River in Nova Scotia and on the Tantramar and Shepody Rivers in New Brunswick. Construction on the Shepody River project was started in 1953.

Subsection 2.—Provincial Projects

Saskatchewan.*—Crown lands have been administered by the Lands Branch of the Saskatchewan Department of Agriculture since Apr. 1, 1947. On Apr. 1, 1949, the Conservation and Development Branch was established and made responsible for: (1) the administration of water rights; (2) development of irrigation; (3) flood control and drainage; (4) restoration of abandoned, under-utilized and misused lands; and (5) construction of provincial community pastures outside the area covered by the agreement with PFRA and not provided for in the agreement with the Federal Government.

The Provincial Department of Agriculture's conservation and development activity in the field of agricultural rehabilitation and reclamation is based on co-operation with the federal PFRA program with which a closely knit working arrangement is maintained. Following is a summary of the activities of the Saskatchewan Department of Agriculture, as at Dec. 31, 1953:—

Irrigation Development.—By the end of 1953, 100,908 acres of topographic surveys and 139 miles of strip topographic surveys were completed on irrigation projects; 252 miles of ditch were built and 84 miles maintained; 1,122 structures were installed and 3,310 acres were levelled.

Drainage Development.—Topographic surveys covered 121,034 acres and 3,146 miles of strip topographic surveys were completed on drainage projects; 298 miles of ditch and 120 miles of road were built and 93 miles of ditch maintained; 196 structures were installed in drainage systems.

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* Prepared under the direction of W. H. Horner, Deputy Minister of Agriculture, Regina, Sask.

Development of Under-utilized and Misused Lands.—A total of 40,122 acres of tame perennial forage crops were seeded, mostly for fodder production; and 538 miles of fence were built or rebuilt in the establishment of departmental, municipal or co-operative pastures.

Miscellaneous Project Work.—Such projects included: regrassing about 12,000 acres; planting 350,000 trees; constructing 89 dams and dugouts (with the co-operation of groups of farmers in the area of northern Saskatchewan outside the boundaries of the PFRA program) organizing 11 conservation areas covering 1,418,000 acres, in order to help local farmers install and maintain drainage and other conservation works.

Pasture Development.—Development and improvement of 72 pastures, with a total area of 639,025 acres, was carried out in the area of the Province outside the PFRA program. These pastures are operated by the Lands Branch of the Department of Agriculture, by the municipality or municipalities in which they are located, or by co-operative associations. In 1953, provincial community pastures alone provided grazing for 12,536 cattle and calves owned by 582 local farmers.

Development of Land for Settlement.—Six projects for the development and improvement of unoccupied land for agricultural settlement were carried out during the period Apr. 1, 1950, to Dec. 31, 1953. These projects included the breaking of 50 acres on each of 287 farm units; each unit is leasable for a 33-year term, the leases specifying the conservation methods to be followed.

Alberta.*—Extensive surveys have been carried out in Alberta to determine the distribution and extent of the available water supplies in the Province and their most beneficial use for irrigation, water power and other purposes. Sect. 69 of the Alberta Water Resources Act gives the Minister of the Department of Water Resources wide powers with respect to investigation of the water resources of the Province.

In more recent years much of the work has been carried out by the Federal Government in co-operation with the Provincial Government. Stream measurement is now done by the Hydrometric Service of the Federal Department of Northern Affairs and National Resources, and irrigation surveys are carried out largely by the Water Development Organization under PFRA. The Water Resources Division of the Federal Resources Department and the power companies operating in the Province also assist in the program.

The Calgary Power Company has completed a fairly extensive and detailed water-power survey of the Bow River and its tributaries and, as a result, the Company has constructed a number of water-power reservoirs and power stations on the stream. Also, in co-operation with the Provincial Government, the Company has made a preliminary survey of Lesser Slave River and the Athabasca River from Athabasca to McMurray.

By Order in Council dated Feb. 17, 1941, the St. Mary and Milk River Water Development Committee was set up to investigate and report on the many phases of irrigation development of southern Alberta including water supplies available to Canada from the Waterton, Belly, St. Mary and Milk Rivers; the most feasible plan to put these waters to the most beneficial use; the benefits that such water-development projects would confer on federal and provincial interests; the allocation of costs; and methods that might be adopted to finance such developments. The

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* Prepared by J. L. Reid, Secretary, Alberta Power Commission, Edmonton, Alta.

Committee completed a very thorough investigation and published a full and comprehensive report, not only on the projects on the international streams, but also on other projects in Alberta.

The allocation of water to the major irrigation projects in Alberta, as approved by the Prairie Provinces Water Board, are as follows:—

Project	*Acres Irrigable*	*Water Allocation in Acre-feet*
St. Mary and Milk River Development	465,000	796,000
Western Irrigation District	50,000	85,700
Eastern Irrigation District	281,000	562,000
Bow River Irrigation Development	240,000	478,534
United Irrigation District	34,000	51,000
Lethbridge Northern District	96,135	150,000
Mountain View Irrigation District	3,600	6,000
Ætna Irrigation District	7,300	13,000
Leavitt Irrigation District	4,400	7,000
Macleod Irrigation District	5,000	8,000
Private Projects	70,000	80,000
TOTALS	1,256,435	2,237,234

The following paragraphs outline development during the 1953-54 season:—

St. Mary River Project.—Progress on this project was good during the season despite delay caused by a wet spring. By early 1954, 263,000 acres were either being served, were completed and capable of being served or were under construction. To Mar. 31, 1954, the Alberta Government's expenditure on the project was estimated at $11,739,361.

Bow River Project.—During the season, PFRA completed construction of the Travers dam and continued construction on the main canal and other works. The Alberta Government expended approximately $200,000 on the Retlaw-Lomond section of the Bow River project and awarded the 1954-55 contract for that tract; appropriation for 1954-55 is $750,000.

William Pearce Irrigation Project.—Surveys and studies were continued during 1953 regarding the suitability of the soils in those areas blocked out for the project.

Macleod Irrigation District.—This system was placed in operation for a short period in 1953 but very little irrigating was carried out. Most of the water run through the system was used to fill dugouts for stock-watering purposes. During the year extensions were made to the main canal and laterals. The amount expended on this project by the Provincial Government in the year ended Mar. 31, 1954, was $21,400.

Lake Level Stabilization.—Water stabilization projects have been built as a co-operative effort between the Water Resources Office, the Department of Lands and Forests and Ducks Unlimited. For the most part, they are small structures placed in the outlets of major lakes and pipes are inserted through the dams to maintain steady flow in outlet creeks. These projects have a definite water conservation value as well as furnishing a habitat for fish and game. In 1953, work was done on Norberg and Bunder Lakes; the expenditure on these two projects was $8,000.

Heart River Project.—No major construction was done on this project in 1953 but a canal that will supply water to the town of McLennan will be constructed in 1954.

Stream Control.—The season's work consisted of: additional dyking on the Highwood River for the purpose of retaining Bow River water in its own watershed; extending and repairing the dyke near the town of Fort Macleod, which was damaged during the flood of 1953; cleaning out the Seven Persons Creek and Ross Creek channels at Medicine Hat; preparing an aerial survey map of the Blairmore and Coleman district to correct the flooding of the Crowsnest River; constructing protection works to prevent the Oldman River from by-passing the diversion works of the Lethbridge Northern Irrigation District. Expenditure on these projects amounted to $233,245 in the year ended Mar. 31, 1954.

Peace River Dugout Program.—The Provincial Department of Agriculture extends assistance for the construction of dugouts in the Peace River area because of a serious lack of underground water. Assistance is on the basis of six cents per cu. yard up to a maximum of $120 per dugout (2,000 cu. yards). During 1953, 115 dugouts were constructed making a total of 2,163 dugouts to Mar. 31, 1954. Expenditure in 1953-54 amounted to $12,463. The program, which is of incalculable benefit to the Peace River area, is administered by District Agriculturists.

Ground Water Control Act.—This Act, passed in 1953, is designed to prevent the wastage of underground water and water pressure in the acquafers. Regulations were drafted and are now officially adopted requiring the registration of all those who drill for water on lands not necessarily their own. It is now proposed to register all water-boring operators and to require proper control of water flows obtained from underground sources.

British Columbia.*—About 17 p.c. of the arable land in British Columbia is under cultivation and nearly all the grazing area is being utilized. The 1,100,000 acres developed give a ratio of approximately one acre per person. Within this arable area there exist an estimated 163,777 acres of irrigated land, and the total acreage of irrigable land in British Columbia is estimated at 181,974 acres.

About two-thirds of the irrigated area is made up of individual projects and the other third is served by the larger irrigation projects listed in Table **5**.

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* Prepared by E. H. Tredcroft, Comptroller of Water Rights, Department of Lands and Forests, Victoria, B.C.

5.—Major Irrigation Projects in British Columbia, *circa* 1954

Project	Water Supply	Irrigable Area	Irrigated Area	Average Irrigation Charge	Locality
		acres	acres	$	
Provincial Irrigation System—					
Southern Okanagan Lands Project	Okanagan River	5,000	4,200	12.50	Okanagan Valley
Municipal Irrigation Systems—					
Penticton Municipality	Penticton and Ellis Creeks	2,500	2,200	18.00	Okanagan Valley
Summerland Municipality	Trout and Eneas Creeks	3,452	3,407	13.42	"
Irrigation Districts—					
Balfour Irrigation District	Laird Creek	240	150	..	Kootenay Valley
Bankhead	Kelowna and Mission Creeks	85	85	..	Okanagan Valley
Barriere	Barriere River	182	80	2.25	North Thompson Valley
B.C. Fruitlands	Jameson and North Thompson Rivers	2,657	2,218	13.50	"
Black Mountain	Mission Creek, etc.	4,174	4,174	11.00	Okanagan Valley
Blueberry Creek	Blueberry Creek	140	..	15.00	Columbia Valley
Boundary Line	Osoyoos Lake	95	95	13.50	Okanagan Valley
Brent Davis	Mission Creek	480	405	6.00	"
Cawston	Similkameen River	643	481	14.00	"
Chase	Chase Creek	639	625	2.50	South Thompson Valley
Covert	4th of July Creek	278	278	4.50	Near Grand Forks

5.—Major Irrigation Projects in British Columbia, *circa* 1954—concluded

Project	Water Supply	Irrigable Area	Irrigated Area	Average Irrigation Charge	Locality
		acres	acres	$	
Irrigation Districts—concl.					
Darfield	Lindquist Creek	363	200	..	North Thompson Valley
East Creston	Arrow Creek	1,562	1,378	3.96	Kootenay Valley
Ellison	Kelowna Creek	662	662	..	Okanagan Valley
Girouard	B.X. (Swan Lake) Creek	101	49	6.00	"
Glenmore	Kelowna Creek	1,851	1,851	8.00	"
Grand Forks	Kettle River	2,500	2,000	7.20	Kettle Valley
Heffley	North Thompson River	1,648	1,648	6.00	North Thompson Valley
Kaleden	Marron River, Shatford Creek, etc	600	535	23.41	Okanagan Valley
Keremeos	Ashnola River, etc	1,120	940	14.40	Similkameen Valley
Malcolm Horie	Joseph Creek	220	150	3.00	Near Cranbrook
Merritt Central	Coldwater River	125	100	2.50	Nicola Valley
Naramata	Lequime, Naramata, Robinson Creeks	977	977	19.51	Okanagan Valley
Okanagan Falls	Shuttleworth Creek	530	209	10.00	"
Okanagan Mission	Bellevue Creek and Okanagan Lake	446	366	17.00	"
Osoyoos	Haynes Creek, etc	203	25	..	"
Oyama	Long Lake	293	293	22.00	"
Peachland	Peachland Creek	550	440	18.00	"
Renata Irrigation District	Dog Creek	162	129	15.00	Columbia Valley
Robson	Pass Creek	263	250	6.00	"
Scotty Creek	Scotty Creek	863	863	..	Okanagan Valley
South East Kelowna	Hydraulic Creek	2,777	2,777	13.32	"
South Vernon	Vernon Creek	319	207	3.60	"
Trout Creek	Trout Creek	320	309	12.60	"
Valleyview	South Thompson River	107	107	3.00	South Thompson Valley
Vermilion	Kindersley Creek	1,491	..	5.75	Columbia Valley
Vernon	Coldstream, Paradise Creeks, etc	7,836	..	10.00	Okanagan Valley
Vinsulla	Knouff Creek, etc	298	155	3.50	"
Westbank	Powers Creek	798	772	15.30	"
Winfield and Okanagan Centre	Vernon Creek	1,897	1,858	15.00	"
Wynndel	Duck Creek	516	417	4.50	Kootenay Valley
Irrigation Companies—					
Columbia Valley Irrigated Fruitlands Company	Bruce Creek	2,000	367	3.50	Columbia Valley
Woods Lake Water Company	Oyama Creek	832	832	7.50	Okanagan Valley

Section 4.—Statistics of Agriculture*

The collection, compilation and publication of statistics relating to agriculture is a responsibility of the Dominion Bureau of Statistics. Valuable information is obtained through the Decennial Census of Canada and the Census of the Prairie Provinces. Complete details of the 1951 Census of Agriculture may be found in Volume VI of the *Census of Canada, 1951*.†

The Bureau also collects and publishes primary and secondary statistics of agriculture on an annual and monthly basis. The primary statistics relate mainly to the reporting of crop conditions, crop and live-stock estimates, values of farm lands, wages of farm labour and prices received by farmers for their products. The secondary statistics relate to the marketing of grain and live stock, dairying, milling and sugar industries and cold-storage holdings.

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* Revised in the Agriculture Division, Dominion Bureau of Statistics.

† Copies obtainable from the Dominion Statistician or the Queen's Printer, Ottawa, Ont.

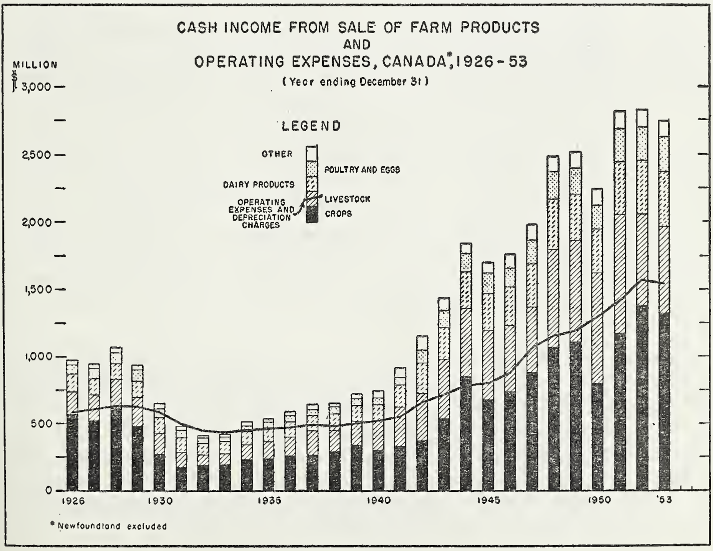
In the collection of annual and monthly statistics, the Federal Department of Agriculture and the Provincial Departments of Agriculture, as well as such agencies as the Board of Grain Commissioners and the Canadian Wheat Board, co-operate with the Bureau. Many thousands of farmers throughout Canada also send in reports voluntarily.

The figures for 1949 to 1953 (except for 1951 Census data) contained in this Section do not include those for Newfoundland, though that Province came into Confederation on Mar. 31, 1949. Agriculture plays a relatively minor part in Newfoundland's economy. The climate is not well suited to the production of any but the hardier crops and the amount of pasture land and arable soil is limited.

Subsection 1.—Cash Income from the Sale of Farm Products

Preliminary estimates indicate that, during 1953, Canadian farmers (exclusive of Newfoundland) realized $2,741,300,000 from the sale of farm products and from participation payments on previous years' grain crops. This estimate is 3 p.c. below the all-time high of $2,826,600,000 estimated for 1952. Supplementary payments made to western farmers under the provisions of the Prairie Farm Assistance Act amounted to only $1,600,000 in 1953 as compared with $5,100,000 in 1952. Higher income from the sale of wheat, dairy products, eggs, corn, sugar beets, hay and wool was more than offset by lower returns from other products.

As in 1952, a heavy year-end farm carry-over of wheat enabled western farmers to market exceptionally large quantities of this grain during the first seven months of the year. Although deliveries during the latter part of 1953 were below the 1952 level, the total for the year was well above that for 1952. The quality of the grain


CASH INCOME FROM SALE OF FARM PRODUCTS AND OPERATING EXPENSES, CANADA*, 1926-53

(Year ending December 31)

* Newfoundland excluded

delivered during the spring of 1953 was also above that of a year earlier. Though the initial prices for specific grades were unchanged from the previous year, the higher grading resulted in a higher weighted average initial price. Total wheat participation payments in 1953 at $125,400,000 were substantially below those of 1952. Final wheat payments, usually made before the end of the calendar year, were delayed until the closing of the 1952-53 pool on Jan. 30, 1954. Although prices of oats and barley were relatively unchanged in 1953, marketings were down.

The greatest reduction in receipts from the sale of field crops occurred in the receipts from potatoes. As a result of substantial reduction in potato prices from the unusually high levels of the previous year, income from this source was down by more than 50 p.c. A smaller crop and reduced prices combined to provide returns from tobacco of $59,200,000 as against $66,700,000 of the previous year.

Lower prices for all live stock except hogs, and smaller marketings of hogs and sheep combined to reduce income from the sale of live stock about 6 p.c. below the 1952 level. A substantial increase in cattle marketings during the year 1953 reflected the build-up of the cattle population which commenced in 1950 and continued during the period of restricted export movement arising out of the discovery of foot-and-mouth disease in Saskatchewan early in 1952. Support for cattle prices, which commenced in April 1952 as a result of the foot-and-mouth outbreak and the consequent imposition by the United States of an embargo on imports of Canadian cattle, was continued until the lifting of the import restrictions on Mar. 1, 1953. Prices of good steers, at Toronto, fluctuated around the support price of $23 per 100 lb. during the first two months of 1953 and then declined by approximately three dollars to a level that was maintained fairly consistently during the remainder of the year.

Early in 1953, hog marketings began to decline from the 1952 level and, as the year progressed, the difference between the two periods became more apparent. This decline in hog marketings was recorded in all provinces except Alberta where increased marketings occurred. Prices for hogs in 1953 were well above the 1952 level. The weighted average price of all hogs sold in Canada was the third highest on record, being exceeded only by prices established in the years 1949 and 1951. This favourable price position for hogs in Canada during 1953 is attributable, in large part, to the strong market for hogs prevailing in the United States.

Income from the sale of poultry and eggs was about 5 p.c. higher than in 1952. Although income from poultry meat was below the 1952 level, this decline was more than offset by increased returns from the sale of eggs. While total marketings of eggs in 1953 were relatively unchanged from 1952, the average prices realized were substantially higher.

Income from the sale of dairy products at $413,100,000 was approximately 4 p.c. above that of 1952. Lower prices were more than offset by increased production occasioned by a continued rise in numbers of milk cows during the year. Under the Federal Government price-support program, the Agricultural Prices Support Board purchased Canada First Grade creamery butter meeting its specifications at 58 cts. a pound, f.o.b. Montreal or Toronto, with appropriate differentials for other delivery points. This program, in effect for two years and due to expire at the end of April 1953, was renewed for a further two-year period.

6.—Cash Income from the Sale of Farm Products, by Source, 1951-53

(Exclusive of Newfoundland)

NOTE.—Figures for 1926-48 will be found in DBS *Reference Paper No. 25* (Part II). Figures for 1949 are given in the 1952-53 Year Book, p. 407, and for 1950 in the 1954 edition, p. 402.

Item	1951[r]	1952[r]	1953
	$'000	$'000	$'000
Grains, Seeds and Hay—			
Wheat	426,446	587,653	660,181
Wheat participation payments	271,350	165,708	125,353
Oats	58,811	70,909	60,645
Oats participation payments	15,245	24,747	10,950
Barley	67,217	123,519	107,498
Barley participation payments	26,285	32,842	35,876
Rye	13,233	24,319	13,312
Flax	17,581	26,660	19,468
Corn	12,054	13,661	19,506
Clover and grass seed	11,696	10,993	8,677
Hay and clover	3,323	1,377	1,759
Totals, Grains, Seeds and Hay	923,241	1,082,388	1,063,225
Vegetables and Other Field Crops—			
Potatoes	32,080	69,140	31,707
Vegetables	55,452	64,293	61,899
Sugar beets	16,439	14,792	17,570
Tobacco	57,442	66,672	59,208
Totals, Vegetables and Other Field Crops	161,413	214,897	170,384
Live Stock—			
Cattle and calves	493,396	334,352	330,705
Sheep and lambs	17,157	9,948	9,633
Hogs	385,783	337,823	300,537
Poultry	123,280	136,316	134,233
Totals, Live Stock	1,019,616	818,439	775,108
Dairy products	387,899	398,996	413,127
Fruits	34,875	39,972	41,807
Other Principal Farm Products—			
Eggs	126,375	109,499	123,774
Wool	3,864	2,168	2,310
Honey	5,781	5,114	4,289
Maple products	5,778	8,232	4,958
Totals, Other Principal Farm Products	141,798	125,013	135,331
Miscellaneous farm products	52,478	51,679	49,789
Forest products sold off farms	82,743	84,097	83,637
Fur farming	12,398	11,135	8,844
Totals, Cash Income from Farm Products	**2,816,461**	**2,826,616**	**2,741,252**
Supplementary payments[1]	10,356	5,131	1,572
Totals, Cash Income	**2,826,817**	**2,831,747**	**2,742,824**

[1] Includes payments made under the Prairie Farm Assistance Act; other government subsidies have been included in cash income from individual commodities.

7.—Cash Income from the Sale of Farm Products, by Province, 1951-53

NOTE.—Figures for 1926-45 will be found in DBS *Reference Paper No. 25* (Part II). Figures for 1946-49 are given in the 1952-53 Year Book, p. 408, and for 1950 in the 1954 edition, p. 403.

Province	1951$^{\text{r}}$	1952$^{\text{r}}$	1953
	$'000	$'000	$'000
Newfoundland	..	..	..
Prince Edward Island	26,640	31,627	22,435
Nova Scotia	44,395	39,757	40,566
New Brunswick	50,335	52,952	46,051
Quebec	437,006	412,583	387,075
Ontario	786,805	718,965	692,657
Manitoba	265,711	249,843	214,187
Saskatchewan	636,189	710,141	743,352
Alberta	459,949	506,529	491,529
British Columbia	109,431	104,219	103,400
Totals	**2,816,461**	**2,826,616**	**2,741,252**

Net Income of Farm Operators from Farming Operations, 1953.—Preliminary estimates indicate that during 1953, Canadian farm operators (exclusive of Newfoundland) realized a net income from farming operations of $1,656,600,000. This figure is 13 p.c. lower than the revised net income of $1,900,800,000 realized in 1952 and 23 p.c. lower than the 1951 record high net income estimate of $2,154,500,000. The decline in net income for the second consecutive year was the result of a drop of 8 p.c. in the gross farm income, more than offsetting a decline of 3 p.c. in farm operating expenses and depreciation charges. Gross farm income in 1953 is estimated at $3,193,300,000 as compared with the all-time high of $3,578,500,000 reached in 1951. The decline from the 1952 level of $3,477,900,000 was the result of lower returns from the sale of farm products and a very substantial drop in the value of year-end changes in farm-held stocks of grains and live stock. Income in kind for 1953 was down 3 p.c. from 1952; this item includes the value of that produce grown by farm operators and consumed in the farm home plus an imputed rental value of the farm dwelling.

8.—Net Income of Farm Operators from Farming Operations, 1951-53

(Exclusive of Newfoundland)

Item	1951$^{\text{r}}$	1952$^{\text{r}}$	1953
	$'000	$'000	$'000
1. Cash income from sale of farm products	2,816,461	2,826,616	2,741,252
2. Income in kind	408,613	413,496	401,126
3. Value of changes in inventory	353,379	237,742	50,885
4. Gross income (Items 1+2+3)	3,578,453	3,477,854	3,193,263
5. Operating expenses	1,238,011	1,369,860	1,305,518
6. Depreciation charges	196,271	212,346	232,753
7. Total operating and depreciation (Items 5+6)	1,434,282	1,582,206	1,538,271
8. Net income, excluding supplementary payments (Items 4-7)	2,144,171	1,895,648	1,654,992
9. Supplementary payments	10.356	5,131	1,572
10. **Net income of farm operators from farming operations (Items 8+9)**[1]	**2,154,527**	**1,900,779**	**1,656,564**

[1] Includes estimated rental value of farm homes and supplementary payments made under the provisions of the Prairie Farm Assistance Act.

9.—Net Income of Farm Operators from Farming Operations, by Province, 1951-53

Note.—Net income includes estimated rental value of farm homes and supplementary payments made under the provisions of the Prairie Farm Assistance Act.

Province	1951r	1952r	1953
	$'000	$'000	$'000
Newfoundland	..	..	..
Prince Edward Island	17,392	20,550	12,335
Nova Scotia	26,142	18,932	20,155
New Brunswick	37,572	36,196	28,213
Quebec	333,785	272,350	262,520
Ontario	558,174	429,707	401,576
Manitoba	181,897	157,015	110,611
Saskatchewan	552,962	564,917	474,290
Alberta	392,414	361,308	306,951
British Columbia	54,189	39,804	39,913
Totals	**2,154,527**	**1,900,779**	**1,656,564**

Value of Farm Lands.—The average value of occupied farm lands in Canada for 1953 is reported as $51 per acre. This represents an increase of 6·3 p.c. over the average value in 1952 and an increase of 112·5 p.c. over the 1935-39 average. Increases in farm land values over 1952 levels were recorded in all provinces except Prince Edward Island and Nova Scotia. The all-Canada average is determined by weighting the provincial averages by the area of occupied farm land in each province.

10.—Average Values per Acre of Occupied Farm Lands, by Province, Selected Years, 1910-53

Note.—Figures include unimproved lands and buildings.

Province	1910	1920	1929	1935	1939	1941	1943	1945	1947	1949	1950	1951	1952	1953
	$	$	$	$	$	$	$	$	$	$	$	$	$	$
Newfoundland	...	...	...	...	...	...	...	...	...	..	..	..	..	..
Prince Edward Island	31	49	43	31	35	34	37	43	47	52	55	60	61	61
Nova Scotia	25	43	36	31	33	31	35	41	46	49	52	55	54	54
New Brunswick	19	35	35	25	29	25	33	40	44	45	51	52	51	54
Quebec	43	70	55	41	44	50	58	57	61	59	66	74	76	77
Ontario	48	70	60	42	46	45	56	57	64	71	75	90	92	98
Manitoba	29	39	26	17	17	17	19	21	27	36	39	42	43	49
Saskatchewan	22	32	25	17	15	14	15	18	21	24	26	28	29	30
Alberta	24	32	28	16	16	16	18	20	25	33	35	37	37	43
British Columbia	74	175	90	58	60	60	62	67	75	84	87	92	93	99
Canada Average[1]	**33**	**48**	**37**	**24**	**25**	**25**	**28**	**30**	**35**	**40**	**43**	**47**	**48**	**51**

[1] *See* text preceding table.

Subsection 2.—Volume of Agricultural Production

The index of farm production in Canada for 1953 is estimated at 155·0 (1935-39 = 100). This figure is the third highest recorded since 1935 and is exceeded only by the estimate of 164·2 for 1942 and the all-time high of 165·2 established in 1952.

The drop of approximately 10 points in the index from 1952 to 1953 was largely attributable to smaller grain crops and a decline in the output of live stock. To a lesser degree, reduced production of sugar beets, fruits, tobacco, vegetables and maple products also contributed to the decline. Offsetting this to some extent were the gains in production recorded for potatoes, dairy products, and poultry and eggs.

11.—Index Numbers of Physical Volume of Agricultural Production, by Province, 1944-53

(1935-39=100. Exclusive of Newfoundland)

NOTE.—For a description of this index, methods and coverage, *see* DBS *Quarterly Bulletin of Agricultural Statistics* for April-June, 1952. Figures for 1935-43 are given in the 1950 Year Book, p. 420.

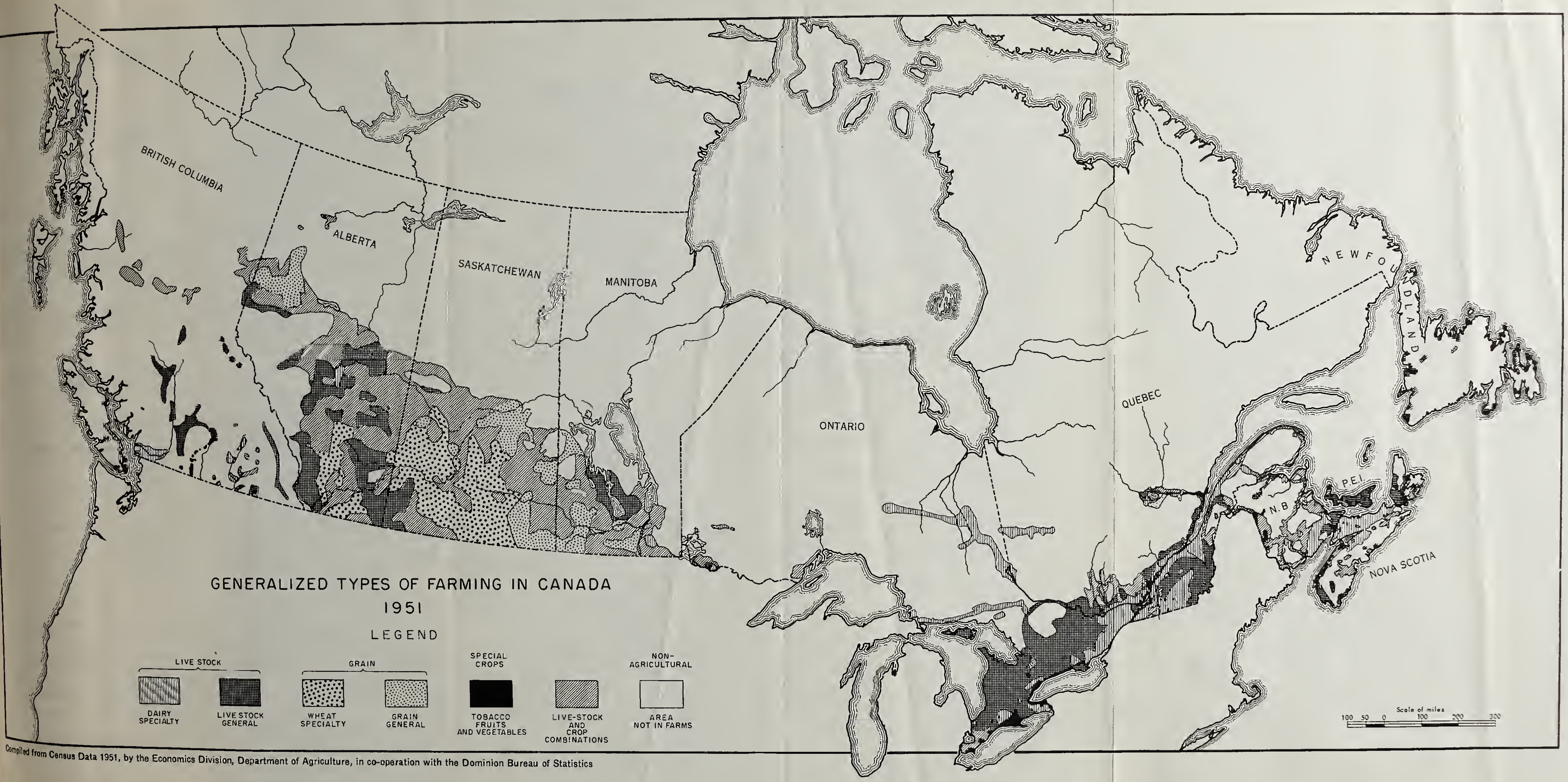
Year	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
1944	119·2	107·3	136·8	131·1	114·0	145·1	196·4	125·1	140·0	140·4
1945	121·3	80·7	106·7	100·7	107·6	116·8	129·3	97·6	131·1	110·9
1946	123·6	100·3	119·6	112·2	117·6	139·1	138·7	122·7	151·9	125·6
1947	128·9	86·7	119·0	102·6	107·7	122·1	128·2	115·8	146·8	116·0
1948	133·3	91·8	124·3	121·6	119·0	143·8	131·8	118·5	143·7	125·1
1949	158·8	105·1	145·8	126·4	124·9	125·7	128·1	98·1	148·7	122·3
1950[r]	148·2	105·2	140·2	136·3	128·1	137·8	168·3	121·8	134·2	137·8
1951[r]	119·5	87·7	110·4	139·0	128·6	146·4	218·1	157·1	126·9	154·7
1952[r]	142·3	79·9	109·4	124·2	117·6	162·7	266·7	175·1	132·2	165·2
1953	142·9	80·0	121·1	131·6	125·5	128·9	230·8	159·6	135·3	155·0

Subsection 3.—Field Crops

Production of many of Canada's grain, fodder and oilseed crops in 1953 reached, for the third consecutive year, unusually high levels. New production records were set for only one crop, soybeans, but harvests of five other crops—wheat, barley, rye, shelled corn and rapeseed—were the second largest on record. Although seeding in many areas throughout the country was unduly prolonged, warm weather and frequent rains, especially in Western Canada, so accelerated plant growth that the adverse effects of late seeding were largely overcome. Losses to the Western Canadian grain crop from insect damage were, as in 1952, almost negligible but damage from hail and rust was more serious than it has been in recent years.

Almost without exception, average yields per acre of spring-sown grains in 1953 were higher than in 1952 in Eastern Canada and British Columbia but somewhat below the record or near-record 1952 levels in the Prairie Provinces. Average yields of fall-sown grains, with the minor exception of fall rye in Quebec, were above those of 1952. Generally favourable growing and harvesting conditions in Western Canada in 1953 also contributed to a crop of high quality. About 79 p.c. of the wheat inspected during the crop year 1953-54 graded No. 4 Northern or higher (excluding "Toughs" and "Damps"), compared with 66 p.c. in 1952-53 and 62 p.c. for the five-year average (1947-48—1951-52). Grades of Western Canadian oats, barley, rye and flaxseed in 1953-54 showed similar improvement over those of both the preceding crop year and the five-year averages.

The gross value of production of principal field crops from Canadian farms in 1952, based on average prices received by farmers throughout the 1952-53 crop year, was estimated at a record $2,306,000,000, exceeding by almost 9 p.c. the previous record of $2,120,000,000 set in 1951. Complete data on the value of Canada's 1953 crops will not be available until several months after the close of the 1953-54 crop year but the gross value is expected to be below that of 1952 as the result of reduced volume of production and somewhat lower prices for many crops. Estimates of the value of the 1953 crops, based on average prices received by farmers during the crop year ended July 31, 1954, will be published in one of the regularly scheduled DBS crop reports and in the *Quarterly Bulletin of Agricultural Statistics*.



BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
QUEBEC
NEWFOUNDLAND
N.B
P.E.I.
NOVA SCOTIA
LEGEND
LIVE STOCK
GRAIN
SPECIAL CROPS
NON-AGRICULTURAL
DAIRY SPECIALTY
LIVE STOCK GENERAL
WHEAT SPECIALTY
GRAIN GENERAL
TOBACCO FRUITS AND VEGETABLES
LIVE-STOCK AND CROP COMBINATIONS
AREA NOT IN FARMS
Scale of miles
100 50 0 100 200 300

GENERALIZED TYPES OF FARMING IN CANADA
1951

Compiled from Census Data 1951, by the Economics Division, Department of Agriculture, in co-operation with the Dominion Bureau of Statistics

12.—Acreages, Yields and Prices of Principal Field Crops, 1951-53, with Five-Year Average, 1945-49

(Exclusive of Newfoundland)

Crop and Year	Area	Yield per Acre	Production	Average Price	Total Value[1]	Crop and Year	Area	Yield per Acre	Production	Average Price	Total Value[1]
	'000 acres	bu.	'000 bu.	$ per bu.	$'000		'000 acres	bu.	'000 bu.	$ per bu.	$'000
Wheat—						Mixed Grains—					
Av. 1945-49	24,717	14·8	366,349	1·62	593,271	Av. 1945-49	1,429	35·4	50,551	0·85	42,859
1951........	25,254	21·9	552,657	1·55	855,137	1951.......	1,524	44·9	68,509	1·01	69,485
1952........	25,995	26·5	687,922	1·59	1,090,512	1952.......	1,570	40·3	63,205	0·97	61,004
1953........	25,513	24·1	613,962	[2]	[2]	1953.......	1,445	43·0	62,188	[2]	[2]
Oats—						Flaxseed—					
Av. 1945-49	12,021	28·4	341,612	0·67	229,883	Av. 1945-49	1,135	8·2	9,253	3·84	35,489
1951........	11,897	41·0	488,191	0·76	369,296	1951.......	1,158	8·5	9,897	3·90	38,616
1952........	11,062	42·2	466,805	0·66	309,477	1952r......	1,130	10·9	12,261	3·16	38,749
1953........	9,830	41·4	406,960	[2]	[2]	1953.......	972	10·2	9,912	[2]	[2]
Barley—						Potatoes—					
Av. 1945-49	6,717	21·5	144,688	0·94	136,599	Av. 1945-49	509	156·0	79,282	1·11	87,669
1951........	7,840	31·3	245,218	1·10	269,951	1951.......	285	169·7	48,355	2·03	98,077
1952........	8,477	34·4	291,379	1·06	307,749	1952r......	297	202·4	60,071	1·68	100,784
1953........	8,911	29·4	262,065	[2]	[2]	1953.......	321	208·7	67,002	[2]	[2]
Rye—						Tame Hay—		ton	'000 tons	$ per ton	
Av. 1945-49	1,128	11·2	12,654	1·86	23,482	Av. 1945-49	11,269	1·62	18,256	15·03	274,474
1951........	1,127	15·7	17,647	1·56	27,575	1951.......	10,538	1·85	19,484	15·26	297,238
1952r.......	1,274	19·5	24,833	1·38	34,267	1952r......	10,679	1·79	19,083	14·24	271,687
1953........	1,494	19·3	28,775	[2]	[2]	1953.......	10,702	1·84	19,650	[2]	[2]

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[1] Gross value of farm production; does not represent cash income from sales. [2] *See* footnote, Table **13.**

13.—Acreages, Production and Values of Principal Field Crops, by Province, 1952 and 1953, with Five-Year Average, 1945-49

(Exclusive of Newfoundland)

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1952	1953	Average 1945-49	1952	1953	Average 1945-49	1952
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
	WHEAT							
Prince Edward Island............	5	4	3	107	85	75	167	160
Nova Scotia.....................	2	1	1	29	22	25	43	41
New Brunswick...................	3	3	3	55	62	70	92	111
Quebec..........................	24	11	11	412	220	241	633	398
Ontario (a) winter wheat..........	719	650	732	20,970	20,800	26,206	33,066	37,648
(b) spring wheat..........	43	37	34	867	760	740	1,376	1,376
Manitoba........................	2,442	2,368	2,208	48,160	57,000	46,000	79,827	92,910
Saskatchewan....................	14,438	16,432	16,100	185,220	435,000	375,000	301,085	691,650
Alberta.........................	6,920	6,404	6,340	107,540	172,000	163,000	171,983	263,160
British Columbia................	122	86	81	2,989	1,973	2,605	4,999	3,058
Totals....................	**24,718**	**25,995**	**25,513**	**366,349**	**687,922**	**613,962**	**593,271**	**1,090,512**

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[1] 1953 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics.*

13.—Acreages, Production and Values of Principal Field Crops, by Province, 1952 and 1953, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1952	1953	Average 1945-49	1952	1953	Average 1945-49	1952
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
OATS								
Prince Edward Island	118	96	106	4,379	3,456	4,779	3,356	3,214
Nova Scotia	69	56	56	2,389	2,356	2,399	2,039	2,332
New Brunswick	191	155	152	6,599	4,650	6,840	5,171	4,138
Quebec	1,481	1,363	1,380	35,462	37,483	42,780	28,745	34,859
Ontario	1,673	1,732	1,548	63,168	67,560	68,576	47,005	55,399
Manitoba	1,542	1,611	1,412	51,300	65,000	53,000	33,205	40,300
Saskatchewan	4,212	3,362	2,721	99,400	152,000	111,000	61,734	89,680
Alberta	2,654	2,587	2,357	75,000	129,000	112,000	45,962	76,110
British Columbia	81	100	98	3,915	5,300	5,586	2,666	3,445
Totals	**12,021**	**11,062**	**9,830**	**341,612**	**466,805**	**406,960**	**229,883**	**309,477**
BARLEY								
Prince Edward Island	11	4	5	324	126	168	331	165
Nova Scotia	8	4	3	221	118	105	249	155
New Brunswick	12	10	9	364	268	338	406	340
Quebec	137	61	56	3,076	1,556	1,582	3,374	2,085
Ontario	256	203	171	8,193	6,689	6,156	7,867	9,030
Manitoba	1,795	2,165	2,365	42,900	71,000	61,000	41,416	78,810
Saskatchewan	2,377	2,644	2,745	43,500	92,000	82,000	40,125	93,840
Alberta	2,106	3,336	3,489	45,600	118,000	108,000	42,326	121,540
British Columbia	15	51	68	510	1,622	2,716	505	1,784
Totals	**6,717**	**8,477**	**8,911**	**144,688**	**291,379**	**262,065**	**136,599**	**307,749**
FALL RYE								
Quebec	10	4	3	166	72	55	217	107
Ontario	87	75	75	1,810	1,494	1,710	2,964	2,390
Manitoba	40	59	120	664	1,000	2,500	1,132	1,420
Saskatchewan	496	379	500	4,023	7,000	9,300	7,883	9,660
Alberta	201	254	328	3,026	5,400	7,500	5,704	7,182
British Columbia	1	2	6	21	67	160	38	96
Totals	**835**	**772**	**1,031**	**9,710**	**15,033**	**21,225**	**17,938**	**20,855**
SPRING RYE								
Manitoba	10	12	15	141	200	250	253	284
Saskatchewan	163	363	316	1,638	7,200	5,100	3,078	9,936
Alberta	120	126	132	1,165	2,400	2,200	2,213	3,192
Totals	**293**	**501**	**463**	**2,944**	**9,800**	**7,550**	**5,544**	**13,412**
ALL RYE								
Quebec	10	4	3	166	72	55	217	107
Ontario	87	75	75	1,810	1,494	1,710	2,964	2,390
Manitoba	50	71	135	805	1,200	2,750	1,385	1,704
Saskatchewan	654	742	816	5,661	14,200	14,400	10,961	19,596
Alberta	321	380	460	4,191	7,800	9,700	7,917	10,374
British Columbia	1	2	6	21	67	160	38	96
Totals	**1,123**	**1,274**	**1,494**	**12,654**	**24,833**	**28,775**	**23,482**	**34,267**

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[1] 1953 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics*.

13.—Acreages, Production and Values of Principal Field Crops, by Province, 1952 and 1953, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1952	1953	Average 1945-49	1952	1953	Average 1945-49	1952
	'000 ac.	'000 ac.	'000 ac.	'000 bu.	'000 bu.	'000 bu.	$'000	$'000
				PEAS				
Quebec	19	3	3	261	58	55	982	263
Ontario	31	9	10	552	144	202	1,575	461
Manitoba	19	18	37	334	460	777	846	1,035
Saskatchewan	6	2	1	91	27	18	242	62
Alberta	16	8	7	215	142	100	598	426
British Columbia	6	2	2	126	57	58	326	154
Totals	**97**	**43**	**60**	**1,579**	**888**	**1,210**	**4,569**	**2,401**
				BEANS				
New Brunswick	1	—	—	19	—	—	81	—
Quebec	12	1	1	183	16	18	760	79
Ontario	80	59	67	1,326	1,277	1,202	4,900	5,619
Totals	**93**	**60**	**68**	**1,528**	**1,293**	**1,220**	**5,741**	**5,698**
				SOYBEANS				
Ontario	73	172	216	1,491	4,128	4,406	3,490	10,526
				BUCKWHEAT				
New Brunswick	15	9	7	376	189	221	460	234
Quebec	82	41	41	1,640	865	997	1,886	1,176
Ontario	121	63	77	2,452	1,443	1,740	2,476	1,833
Manitoba	4	10	14	56	183	252	73	229
Totals	**222**	**123**	**139**	**4,524**	**2,680**	**3,210**	**4,895**	**3,472**
				MIXED GRAINS				
Prince Edward Island	61	71	70	2,384	2,777	3,229	2,018	2,721
Nova Scotia	5	10	9	173	392	404	168	451
New Brunswick	10	8	7	350	236	324	282	236
Quebec	279	218	202	7,282	6,605	6,565	7,247	7,926
Ontario	989	1,129	1,017	38,299	47,970	46,884	31,673	45,572
Manitoba	20	37	33	518	1,200	1,112	352	924
Saskatchewan	20	24	23	383	1,000	684	275	800
Alberta	38	71	81	843	2,900	2,821	580	2,262
British Columbia	8	2	3	319	125	165	264	112
Totals	**1,430**	**1,570**	**1,445**	**50,551**	**63,205**	**62,188**	**42,859**	**61,004**
				FLAXSEED				
Ontario	36	75	41	420	871	537	1,698	2,866
Manitoba	443	500	420	4,224	4,800	3,800	16,280	15,312
Saskatchewan	508	380	342	3,197	4,300	3,500	11,885	13,459
Alberta	145	167	164	1,375	2,200	2,000	5,486	6,820
British Columbia	3	7	5	37	90	75	140	292
Totals	**1,135**	**1,130**	**972**	**9,253**	**12,261**	**9,912**	**35,489**	**38,749**

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[1] 1953 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics.*

13.—Acreages, Production and Values of Principal Field Crops, by Province, 1952 and 1953, with Five-Year Average, 1945-49—continued

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1952	1953	Average 1945-49	1952	1953	Average 1945-49	1952
	'000 ac.	'000 ac.	'000 ac.	'000 lb.	'000 lb.	'000 lb.	$'000	$'000
				SUNFLOWER SEED				
Manitoba	29	3	4	16,312	1,896	3,960	952	95
				RAPESEED				
Manitoba	—	6	4	—	4,500	3,375	—	148
Saskatchewan	40	12	37	29,663	11,400	48,100	1,746	399
Totals	**40**	**18**	**42**	**29,663**	**15,900**	**51,475**	**1,746**	**547**
				SHELLED CORN				
				'000 bu.	'000 bu.	'000 bu.		
Ontario	225	320	347	10,451	19,170	20,404	13,364	27,796
Manitoba	13	20	15	304	552	450	330	607
Totals	**238**	**339**	**362**	**10,755**	**19,722**	**20,854**	**13,694**	**28,403**
				POTATOES				
Prince Edward Island	46	36	39	10,220	10,800	10,647	7,931	13,392
Nova Scotia	22	12	12	4,080	2,760	2,864	4,727	5,989
New Brunswick	66	43	48	15,838	10,974	13,988	14,314	13,169
Quebec	154	92	100	19,600	13,755	16,600	22,828	26,547
Ontario	116	56	63	16,998	11,276	11,883	21,390	24,243
Manitoba	25	17	19	2,863	2,751	3,196	2,924	4,402
Saskatchewan	36	14	13	3,075	1,847	1,677	3,862	2,623
Alberta	25	17	15	3,022	3,256	2,757	4,025	4,982
British Columbia	17	10	11	3,586	2,652	3,390	5,668	5,437
Totals	**507**	**297**	**321**	**79,282**	**60,071**	**67,002**	**87,669**	**100,784**
				FIELD ROOTS				
				'000 tons	'000 tons	'000 tons		
Prince Edward Island	12	7	7	178	105	90	2,869	1,344
Nova Scotia	10	4	5	128	64	65	3,055	1,382
New Brunswick	11	4	4	113	45	42	1,880	855
Quebec	25	11	11	204	77	86	4,842	1,491
Ontario	55	18	17	512	204	194	8,253	3,264
Totals	**113**	**45**	**43**	**1,134**	**495**	**477**	**20,899**	**8,336**
				TAME HAY				
Prince Edward Island	226	199	191	340	418	363	4,734	5,016
Nova Scotia	418	353	345	726	847	759	12,240	12,366
New Brunswick	640	443	430	897	886	688	14,198	11,119
Quebec	4,163	3,673	3,637	5,866	6,060	5,201	93,420	74,538
Ontario	3,777	3,401	3,500	7,058	6,157	7,350	100,849	92,355
Manitoba	393	417	450	707	646	945	7,442	8,398
Saskatchewan	439	586	540	622	1,020	972	8,229	14,280
Alberta	907	1,292	1,300	1,331	2,261	2,600	18,392	33,915
British Columbia	306	315	309	709	788	772	14,970	19,700
Totals	**11,269**	**10,679**	**10,702**	**18,256**	**19,083**	**19,650**	**274,474**	**271,687**

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[1] 1953 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics.*

13.—Acreages, Production and Values of Principal Field Crops, by Province, 1952 and 1953, with Five-Year Average, 1945-49—concluded

Province	Area			Total Production			Gross Farm Value[1]	
	Average 1945-49	1952	1953	Average 1945-49	1952	1953	Average 1945-49	1952
	'000 ac.	'000 ac.	'000 ac.	'000 tons	'000 tons	'000 tons	$'000	$'000
	FODDER CORN							
Quebec	101	71	73	865	636	708	6,000	3,975
Ontario	369	268	264	3,360	3,006	2,695	15,691	12,024
Manitoba	21	21	24	73	106	120	528	742
Saskatchewan	6	1	1	15	4	3	146	43
British Columbia	4	4	3	42	46	39	310	413
Totals	**501**	**365**	**365**	**4,355**	**3,798**	**3,565**	**22,675**	**17,197**
	SUGAR BEETS							
Quebec	3	8	7	27	87	70	344	1,216
Ontario	22	32	23	218	332	246	2,950	4,769
Manitoba	11	16	17	90	124	162	1,111	1,792
Alberta	30	37	35	354	480	422	4,672	7,716
Totals	**66**	**93**	82	**689**	**1,023**	**900**	**9,077**	**15,493**

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[1] 1953 values not available at time of going to press; estimates will be published in DBS crop reports and the *Quarterly Bulletin of Agricultural Statistics.*

14.—Acreages and Production of Grain in the Prairie Provinces, 1951-53

NOTE.—Figures for years before 1951 will be found in the corresponding table of previous editions of the Year Book.

Grain	Acreages			Production		
	1951	1952	1953	1951	1952	1953
	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.
Wheat	24,385	25,204	24,648	529,000	664,000	584,000
Oats	8,312	7,560	6,490	340,000	346,000	276,000
Barley	7,530	8,145	8,599	234,000	281,000	251,000
Rye	1,047	1,193[r]	1,411	15,980	23,200[r]	26,850
Flaxseed	1,086	1,047[r]	926	8,870	11,300[r]	9,300

Stocks of Grain in Canada.—Table **15** shows the stocks of Canadian grain on hand in Canada and in the United States on July 31 for the years 1951-53, with averages for the five-year periods 1935-39, 1940-44 and 1945-49. Stocks in Canada are separated into those in commercial positions and those on farms. Stocks on farms and in country elevators in the Prairie Provinces are given separately.

15.—Carryover of Canadian Grain as at July 31, 1951-53, with Five-Year Averages, 1935-49

NOTE.—Figures for individual years before 1951 will be found in the corresponding table of previous editions of the Year Book.

As at July 31—	Total in Canada and United States	Total in Canada	In Commercial Storage in Canada	On Farms in Canada	Prairie Provinces	
					On Farms	In Country Elevators
	bu.	bu.	bu.	bu.	bu.	bu.
			WHEAT			
Av. 1935-39.....	101,142,053	92,273,005	86,848,305	5,424,700	4,328,000	18,075,723
Av. 1940-44.....	431,102,442	408,734,141	351,581,341	57,152,800	54,960,000	154,370,863
Av. 1945-49.....	119,587,196	115,603,875	82,718,676	32,885,200	31,265,600	24,698,778
1951............	189,202,667	187,189,563	164,929,563	22,260,000	20,000,000	78,529,616
1952............	217,177,826	214,934,143	195,672,143	19,262,000	18,000,000[r]	98,782,136
1953............	369,185,486	368,545,625	288,829,625	79,716,000	77,000,000	154,702,768
			OATS			
Av. 1935-39.....	30,700,483	30,682,283	6,229,883	24,452,400	12,585,600	1,361,855
Av. 1940-44.....	74,984,299	74,212,213	16,435,613	57,776,600	43,826,600	6,500,924
Av. 1945-49.....	70,725,656	69,841,382	18,954,582	50,886,800	41,042,800	5,091,295
1951............	95,177,487	94,526,622	35,045,622	59,481,000	43,000,000	14,922,787
1952............	108,358,284	104,861,518	47,025,518	57,836,000	45,000,000[r]	25,455,272
1953............	144,409,073	143,525,521	52,865,521	90,660,000	78,500,000	38,504,134
			BARLEY			
Av. 1935-39.....	8,096,869	7,827,168	4,182,808	3,644,360	2,500,800	711,449
Av. 1940-44.....	29,922,222	28,868,755	12,191,755	16,677,000	15,453,000	4,138,057
Av. 1945-49.....	29,747,854	29,512,098	12,702,098	16,810,000	16,140,000	3,842,261
1951............	53,496,371	53,496,371	35,642,371	17,854,000	17,000,000[r]	11,584,103
1952............	79,503,741	79,286,664	57,810,664	21,476,000	21,000,000[r]	26,916,163
1953............	111,666,834	111,260,514	73,025,514	38,235,000	37,000,000	47,738,023
			RYE			
Av. 1935-39.....	2,236,368	1,940,370	1,763,390	176,980	149,000	373,309
Av. 1940-44.....	6,897,205	4,942,647	3,260,247	1,682,400	1,617,800	1,172,857
Av. 1945-49.....	3,273,777	3,123,572	2,023,372	1,100,200	1,053,400	544,436
1951............	3,298,681	2,624,988	1,774,988	850,000	800,000	226,523
1952............	8,094,397	7,517,089	6,171,089	1,346,000	1,300,000	2,232,344
1953............	16,190,618	15,288,159	12,133,159	3,155,000	3,050,000	3,417,245
			FLAXSEED			
Av. 1935-39.....	277,016	277,016	271,356	5,660	5,000	64,481
Av. 1940-44.....	1,923,885	1,923,885	1,667,525	256,360	251,700	373,895
Av. 1945-49.....	3,888,325	3,888,325	3,423,525	464,800	461,400	240,711
1951............	1,203,778	1,203,778	997,778	206,000	205,000	113,467
1952............	2,588,918[r]	2,588,918[r]	2,054,918	409,000	390,000	526,003
1953............	3,939,420	3,939,420	2,468,420	1,471,000	1,450,000	972,940

Subsection 4.—Live Stock

The numbers of live stock on farms in the different provinces for 1952 and 1953 are given in Table 16 and the average value per head of farm live stock is given by province in Table 17.

16.—Live Stock on Farms, by Province, at June 1, 1952 and 1953

Province and Item	1952	1953	Province and Item	1952	1953
	No.	No.		No.	No.
Newfoundland—			**Manitoba—**		
Horses	..	..	Horses	113,500	96,800
Milk cows[1]	..	..	Milk cows[1]	209,000	195,000
Other cattle	..	..	Other cattle	476,000	459,000
Sheep	..	..	Sheep	68,000	65,000
Swine	..	..	Swine	399,000	287,000
Prince Edward Island—			**Saskatchewan—**		
Horses	19,700	19,000	Horses	279,500	255,500
Milk cows[1]	41,000	44,000	Milk cows[1]	289,000	285,000
Other cattle	63,900	70,000	Other cattle	1,093,000	1,150,000
Sheep	36,200	38,700	Sheep	155,000	170,000
Swine	77,000	57,000	Swine	646,000	469,000
Nova Scotia—			**Alberta—**		
Horses	24,400	23,400	Horses	239,700	222,000
Milk cows[1]	83,000	88,000	Milk cows[1]	280,000	289,000
Other cattle	102,700	114,000	Other cattle	1,474,000	1,621,000
Sheep	83,700	95,000	Sheep	387,000	432,000
Swine	51,000	39,000	Swine	1,170,000	1,180,000
New Brunswick—			**British Columbia—**		
Horses	29,800	29,000	Horses	34,100	30,300
Milk cows[1]	86,000	95,000	Milk cows[1]	84,000	94,000
Other cattle	91,900	98,400	Other cattle	254,200	258,000
Sheep	55,000	64,300	Sheep	76,500	81,000
Swine	83,000	56,000	Swine	66,000	42,000
Quebec—			**Yukon Territory—**		
Horses	221,000	218,000	Horses	..	..
Milk cows[1]	937,000	1,016,200	Milk cows[1]	..	..
Other cattle	871,000	903,600	Other cattle	..	..
Sheep	337,100	360,800	Sheep	..	..
Swine	1,312,000	867,000	Swine	..	..
Ontario—			**Totals—**		
Horses	218,700	202,200	**Horses**	**1,180,400**	**1,096,200**
Milk cows[1]	959,000	1,040,000	**Milk cows[1]**	**2,968,000**	**3,146,200**
Other cattle	1,778,000	1,942,000	**Other cattle**	**6,204,700**	**6,616,000**
Sheep	389,700	414,500	**Sheep**	**1,588,200**	**1,721,300**
Swine	1,937,000	1,450,000	**Swine**	**5,741,000**	**4,447,000**

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[1] Cows and heifers, two years or over, kept for milk purposes.

17.—Average Value per Head of Farm Live Stock, by Province, 1952 and 1953

Province and Item	1952	1953	Province and Item	1952	1953	Province and Item	1952	1953
	$	$		$	$		$	$
Newfoundland—			**Quebec—**			**Alberta—**		
Horses	..	..	Horses	142	141	Horses	50	51
All cattle	..	..	All cattle	136	112	All cattle	164	129
Milk cows[1]	..	..	Milk cows[1]	188	153	Milk cows[1]	235	190
Other cattle	..	..	Other cattle	80	65	Other cattle	150	118
Sheep	..	..	Sheep	20	17	Sheep	20	19
Swine	..	..	Swine	26	31	Swine	26	31
P. E. Island—			**Ontario—**			**British Columbia—**		
Horses	102	89	Horses	98	91	Horses	84	81
All cattle	134	103	All cattle	167	133	All cattle	150	133
Milk cows[1]	190	151	Milk cows[1]	228	179	Milk cows[1]	205	188
Other cattle	98	73	Other cattle	134	109	Other cattle	132	112
Sheep	22	18	Sheep	28	24	Sheep	25	22
Swine	27	31	Swine	28	32	Swine	29	33
Nova Scotia—			**Manitoba—**			**Yukon Territory—**		
Horses	131	124	Horses	56	55	Horses	..	..
All cattle	140	109	All cattle	153	125	All cattle	..	..
Milk cows[1]	200	156	Milk cows[1]	214	176	Milk cows[1]	..	..
Other cattle	92	73	Other cattle	127	104	Other cattle	..	..
Sheep	20	16	Sheep	19	19	Sheep	..	..
Swine	28	27	Swine	25	32	Swine	..	..
New Brunswick—			**Saskatchewan—**			**Totals—**		
Horses	129	120	Horses	43	45	**Horses**	**80**	**80**
All cattle	121	108	All cattle	158	122	**All cattle**	**156**	**125**
Milk cows[1]	172	156	Milk cows[1]	216	166	**Milk cows[1]**	**210**	**169**
Other cattle	74	62	Other cattle	142	111	**Other cattle**	**129**	**104**
Sheep	20	18	Sheep	19	18	**Sheep**	**22**	**20**
Swine	26	30	Swine	24	27	**Swine**	**27**	**31**

[1] Cows and heifers, two years or over, kept for milk purposes.

The Federal Department of Agriculture inspects all live stock in plants designated as inspected establishments under the Meat and Canned Foods Act. A statistical record is kept of these inspections and the figures appear in Table **18**. Local wholesale butchering and such slaughterings as are carried out by retail butchers and by farmers for their own use are not included. Actually, the slaughtering and meat-packing industry is concentrated into a comparatively small number of large establishments to facilitate greater efficiency and utilization of products. Thus, the figures of Table **18** are fairly inclusive. The slaughtering and meat-packing industry is dealt with in its proper relation to all other manufacturing enterprises in Chapter XV of this volume. On a gross value basis it normally ranks among the three largest manufacturing industries in Canada but it owes its importance to the value of raw products obtained from the farmer and the rancher rather than to the value added by the manufacturing process.

18.—Live Stock Slaughtered at Inspected Establishments, 1938-53, and by Month, 1953

(Exclusive of Newfoundland)

Year	Cattle	Calves	Sheep	Hogs	Year and Month	Cattle	Calves	Sheep	Hogs
	No.	No.	No.	No.		No.	No.	No.	No.
1938	859,260	676,579	801,679	3,137,203	**1953**				
1939	873,660	679,117	783,828	3,623,645	January	112,829	31,496	29,554	422,195
1940	890,919	703,918	765,165	5,457,083	February	106,317	33,899	25,232	421,662
1941	1,003,691	727,829	828,603	6,280,345	March	110,946	63,826	22,366	462,424
1942	970,415	666,672	825,368	6,196,850	April	111,869	99,104	17,061	449,865
1943	1,021,054	594,087	889,317	7,168,525	May	110,588	87,298	8,730	392,359
1944	1,354,121	661,245	959,169	8,766,417	June	115,166	74,269	10,686	343,895
1945	1,891,024	787,626	1,185,161	5,681,629	July	126,702	62,344	30,351	296,401
1946	1,668,441	752,343	1,213,235	4,252,591	August	124,349	58,890	65,724	255,232
1947	1,291,759	665,311	900,766	4,452,816	September	137,049	62,777	89,195	304,687
1948	1,489,883	787,410	768,943	4,487,649	October	142,890	62,227	114,020	396,291
1949	1,439,489	766,277	629,673	4,098,609	November	151,482	58,836	84,318	428,781
1950	1,284,683	773,205	521,089	4,405,055	December	119,219	45,757	46,134	437,520
1951	1,149,789	583,718	438,518	4,488,007					
1952	1,237,630	567,760	512,966	6,234,145	**Totals, 1953**	**1,469,406**	**740,723**	**543,371**	**4,611,312**

Wool.—Wool production in Canada (exclusive of Newfoundland) in 1953 was 12 p.c. above that of 1952. The 1935-39 average was 16,022,000 lb. and the 1953 production 8,621,000 lb. The shorn-wool production in 1953 was higher, the result of an increase in sheep population. Average fleece weight was 7·4 lb. compared with 7·7 lb. in 1952. The 49·4 p.c. increase in wool pulled from domestic skins was partly accounted for by an increase in inspected slaughterings of sheep and lambs.

Exports of wool in 1953 were 3,756,000 lb. compared with 3,639,000 lb. in 1952, while imports rose from 49,537,000 lb. in 1952 to 63,088,000 lb. in 1953. Thus, assuming there was no change in stocks, the domestic disappearance of wool was higher by 26·8 p.c. in 1953 than in 1952.

19.—Production and Apparent Consumption of Wool, 1951-53

Note.—The 1951 figures shown are based on the Census Revisions of 1950 and previous figures on the same basis are not yet available.

Item		1951	1952	1953
Shorn Wool—				
Yield per fleece	lb.	7·5	7·7	7·4
Total yield shorn	'000 lb.	5,700	6,378	6,659
Price per pound	cts.	74	36	38·5
Total value of shorn wool	$'000	4,231	2,265	2,565
Total pulled wool	'000 lb.	1,182	1,313	1,962
Total wool production	"	6,882	7,691	8,621
Apparent consumption	"	73,238	53,589	67,953

Subsection 5.—Dairying

Milk Production.—Milk production in 1953 amounted to 16,424,800,000 lb., an increase of 690,197,000 lb. over the previous year. The proportion of the total milk production used for factory-made dairy products increased from 55·7 p.c. in 1952 to 56·7 p.c. in 1953, but the proportion sold in fluid form showed a very small decrease. Milk used for all purposes on farms (home consumed, manufactured and fed) declined from approximately 14·0 p.c. of the total in 1952 to 13·0 p.c. in 1953.

20.—Production and Utilization of Milk, by Province, 1950-53, with Totals for 1946-53

Note.—Figures for 1950-52 have been revised since the publication of the 1954 Year Book.

Province and Year	Used in Manufacture		Milk Otherwise Used			Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland..............	..	..	..	..	..	..
Prince Edward Island..1950	13,092	119,053	26,530	20,781	6,062	185,518
1951	11,926	130,546	27,079	21,263	6,608	197,422
1952	10,179	123,730	27,698	20,498	5,339	187,444
1953^p	10,086	143,939	27,465	20,975	5,519	207,984
Nova Scotia...........1950	40,110	173,104	144,120	47,330	14,649	419,313
1951	32,989	156,800	151,246	44,610	14,176	399,821
1952	29,508	152,771	158,922	47,160	18,029	406,390
1953^p	29,835	177,348	163,785	45,690	17,595	434,253
New Brunswick........1950	62,016	194,526	133,900	47,318	10,225	447,985
1951	68,017	189,812	135,903	44,278	11,564	449,574
1952	51,316	187,692	138,687	43,970	11,331	432,996
1953^p	49,093	209,929	143,665	44,703	9,420	456,810
Quebec................1950	87,435	2,639,871	1,675,800	286,930	139,853	4,829,889
1951	109,371	2,738,813	1,713,162	277,056	121,508	4,959,910
1952	118,474	2,965,640	1,824,626	278,024	118,268	5,305,032
1953^p	102,726	3,173,611	1,909,880	275,445	116,096	5,577,758
Ontario...............1950	72,518	2,971,223	1,579,600	231,890	208,350	5,063,581
1951	70,431	2,945,242	1,597,820	224,796	211,981	5,050,270
1952	47,104	3,070,685	1,591,182	223,728	204,599	5,137,298
1953^p	33,766	3,202,093	1,652,348	222,957	186,134	5,297,298
Manitoba..............1950	70,543	571,827	202,930	91,438	45,822	982,560
1951	64,128	570,325	200,879	90,137	50,976	976,445
1952	54,475	600,088	205,163	88,932	50,134	998,792
1953^p	50,638	629,786	212,439	92,031	55,325	1,040,219
Saskatchewan.........1950	165,071	707,974	209,910	190,417	69,475	1,342,847
1951	158,246	685,492	214,165	176,013	81,803	1,315,719
1952	146,882	682,186	220,802	169,734	92,275	1,311,879
1953^p	134,924	680,961	234,200	169,229	98,785	1,318,099
Alberta...............1950	110,894	827,929	211,700	140,691	83,622	1,374,836
1951	96,438	770,784	226,263	145,652	87,380	1,326,517
1952	80,894	747,952	240,628	138,123	89,566	1,297,163
1953^p	71,206	811,235	257,547	130,993	96,272	1,367,253
British Columbia......1950	19,160	238,825	361,000	33,319	23,517	675,821
1951	17,080	209,894	351,993	32,185	23,141	634,293
1952	17,363	231,182	348,694	34,165	26,205	657,609
1953^p	15,889	291,445	359,710	33,532	24,550	725,126
Totals............1946	**1,278,736**	**8,871,785**	**4,254,000**	**1,740,072**	**810,960**	**16,955,553**
1947	**1,327,236**	**9,210,818**	**4,162,539**	**1,722,923**	**817,272**	**17,240,788**
1948	**1,480,590**	**8,882,812**	**4,024,917**	**1,594,160**	**747,883**	**16,730,362**
1949	**1,238,322**	**9,020,329**	**4,083,753**	**1,659,650**	**841,291**	**16,843,345**
1950	**640,839**	**8,444,332**	**4,545,490**	**1,090,114**	**601,575**	**15,322,350**
1951	**628,626**	**8,397,708**	**4,618,510**	**1,055,990**	**609,137**	**15,309,971**
1952	**556,195**	**8,761,926**	**4,756,402**	**1,044,334**	**615,746**	**15,734,603**
1953^p	**498,163**	**9,320,347**	**4,961,039**	**1,035,555**	**609,696**	**16,424,800**

21.—Farm Values of Milk Production, by Province, 1950-53, with Totals for 1946-53

NOTE.—Figures for 1950-52 have been revised since the publication of the 1954 Year Book.

Province and Year	Value of Milk Used in Manufacture		Value of Milk Otherwise Used			Value of Total Milk Production
	On Farms	In Factories	Fluid Sales	Farm-Home Consumed	Fed on Farms	
	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	..	..	..	..	..	..
Prince Edward Island..1950	313	2,464	935	497	525	4,734
1951	316	3,054	980	572	582	5,504
1952	270	2,740	1,040	531	527	5,108
1953p	263	3,080	1,011	524	543	5,421
Nova Scotia..........1950	942	3,750	5,934	1,264	1,020	12,910
1951	845	3,972	6,398	1,365	959	13,539
1952	744	3,720	7,007	1,391	1,031	13,893
1953p	752	4,183	7,310	1,343	1,106	14,694
New Brunswick........1950	1,482	3,911	5,347	1,192	974	12,906
1951	1,800	4,433	5,888	1,266	1,029	14,416
1952	1,338	4,094	6,233	1,205	965	13,835
1953p	1,280	4,564	6,447	1,220	975	14,486
Quebec...............1950	2,090	57,035	59,863	6,829	7,732	133,549
1951	2,894	68,931	64,254	7,758	9,525	153,362
1952	3,088	68,774	73,829	7,423	9,993	163,107
1953p	2,634	71,685	76,526	7,272	10,452	168,569
Ontario..............1950	1,733	62,573	58,009	5,241	7,830	135,386
1951	1,894	73,933	62,746	5,957	9,624	154,154
1952	1,228	69,150	68,236	5,638	9,326	153,578
1953p	866	69,122	69,817	5,529	8,922	154,256
Manitoba.............1950	1,596	10,741	6,530	1,948	2,561	23,376
1951	1,642	12,671	7,062	2,298	3,369	27,042
1952	1,304	12,331	7,325	2,125	3,331	26,416
1953p	1,212	12,754	7,936	2,181	3,547	27,630
Saskatchewan.........1950	3,663	13,007	6,914	3,980	3,723	31,287
1951	3,985	14,961	7,513	4,330	4,343	35,132
1952	3,578	13,899	8,073	3,904	4,410	33,864
1953p	3,287	13,721	8,810	3,875	4,503	34,196
Alberta..............1950	2,461	16,228	7,998	3,123	4,112	33,922
1951	2,346	17,699	9,134	3,772	4,544	37,495
1952	1,936	16,342	10,175	3,315	4,216	35,984
1953p	1,704	17,444	11,076	3,144	4,496	37,864
British Columbia......1950	434	6,220	13,995	826	733	22,208
1951	437	6,504	16,041	898	746	24,626
1952	438	6,681	17,875	909	810	26,713
1953p	394	8,201	18,125	882	775	28,377
Totals............1946	**21,306**	**163,407**	**118,624**	**34,513**	**30,526**	**368,376**
1947	**28,217**	**186,796**	**131,409**	**38,393**	**36,087**	**420,902**
1948	**41,255**	**232,403**	**146,446**	**45,170**	**40,868**	**506,142**
1949	**30,790**	**200,399**	**147,755**	**39,850**	**39,238**	**458,032**
1950	**14,714**	**175,929**	**165,525**	**24,900**	**29,210**	**410,278**
1951	**16,159**	**206,158**	**180,016**	**28,216**	**34,721**	**465,270**
1952	**13,924**	**197,731**	**199,793**	**26,441**	**34,609**	**472,498**
1953p	**12,392**	**204,754**	**207,058**	**25,970**	**35,319**	**485,493**

Butter and Cheese Production.—Butter production in 1953 amounted to 325,633,000 lb., 19,405,000 lb. more than in 1952. Of the 1953 total, 302,606,000 lb. was creamery butter, 21,289,000 lb. dairy or farm-made butter and 1,738,000 lb. whey butter. Creamery output was the highest since 1943 when the total was 312,000,000 lb. From that year to 1951 declines were almost continuous but the trend turned upward in 1952 and 1953. Butter production was affected by the introduction of margarine in 1949; output of that product amounted to 73,958,000 lb. in 1949, 94,032,000 lb. in 1950, 108,056,000 lb. in 1951, 110,955,000 lb. in 1952 and 110,499,000 lb. in 1953.

Factory cheese production in 1953 was estimated at 81,660,000 lb., an increase of 10·8 p.c. over the 1952 estimate but 60·6 p.c. below the peak production of 207,431,000 lb. in 1942. Total cheese production in 1942, including factory and farm-made cheese, reached an all-time high of 208,219,000 lb.; the total manufactured in 1952, on the other hand, was probably the lowest since the mid-1880's. Restrictions placed on the importation of cheese into the United Kingdom during 1945 to 1948 was responsible for the drastic cut in cheese production in those years. Lower creamery butterfat prices in 1949 and uncertainties resulting from the introduction of margarine production led farmers to sell more of their milk to cheese factories. This resulted in a temporary recovery of cheese production for that year, but the decline continued in the three succeeding years. The increase in 1953 may be attributed in some measure to a falling-off in the production of evaporated milk.

22.—Production of Butter and Cheese, by Province, 1950-53, with Totals for 1946-53

Province and Year	Butter				Cheese
	Creamery	Dairy	Whey	Total	Factory[1]
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland	..	..	..	..	..
Prince Edward Island 1950	4,626	559	—	5,185	707
1951	5,012	509	—	5,521	878
1952	4,886	435	—	5,321	542
1953	5,727	431	—	6,158	548
Nova Scotia 1950	5,927	1,712	—	7,639	—
1951	5,080	1,408	—	6,488	—
1952	4,953	1,261	—	6,214	—
1953	6,079	1,275	—	7,354	—
New Brunswick 1950	7,320	2,647	—	9,967	856
1951	6,767	2,903	—	9,670	1,331
1952	6,969	2,193	—	9,162	858
1953	7,988	2,098	—	10,086	776
Quebec 1950	87,488	3,732	215	91,435	23,379
1951	91,363	4,668	173	96,204	18,921
1952	102,346	5,063	118	107,527	13,867
1953	112,179	4,390	103	116,672	13,597
Ontario 1950	68,699	3,095	1,925	73,719	72,388
1951	67,137	3,006	1,791	71,934	68,657
1952	78,915	2,013	1,542	82,470	54,378
1953	82,622	1,443	1,609	85,674	61,827
Manitoba 1950	22,522	3,011	30	25,563	1,498
1951	22,277	2,737	28	25,042	1,510
1952	23,549	2,328	27	25,904	1,415
1953	24,992	2,164	21	27,177	1,199
Saskatchewan 1950	28,972	7,045	—	36,017	371
1951	27,903	6,754	—	34,657	376
1952	27,811	6,277	—	34,088	53
1953	27,660	5,766	—	33,426	192
Alberta 1950	31,238	4,733	22	35,993	2,940
1951	28,960	4,116	24	33,100	2,080
1952	27,647	3,457	24	31,128	2,022
1953	29,993	3,043	5	33,041	2,790

For footnote, *see* end of table

22.—Production of Butter and Cheese, by Province, 1950-53, with Totals for 1946-53—concluded

Province and Year	Butter				Cheese
	Creamery	Dairy	Whey	Total	Factory[1]
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
British Columbia.................1950	4,672	818	10	5,500	564
1951	2,666	729	7	3,402	557
1952	3,670	742	2	4,414	466
1953	5,366	679	—	6,045	659
Totals.......................1946	**271,491**	**54,225**	**2,478**	**328,194**	**148,884**
1947	**290,952**	**56,295**	**2,225**	**349,472**	**124,831**
1948	**285,629**	**62,845**	**1,843**	**350,317**	**93,948**
1949	**279,805**	**52,852**	**2,395**	**335,052**	**121,030**
1950	**261,464**	**27,352**	**2,202**	**291,018**	**102,710**
1951	**257,165**	**26,830**	**2,023**	**286,018**	**94,314**
1952	**280,746**	**23,769**	**1,713**	**306,228**	**73,668**
1953	**302,606**	**21,289**	**1,738**	**325,633**	**81,660**

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[1] Factory-made cheese includes cheddar and other cheese made from whole milk. The latter amounted to 5,005,000 lb. in 1950, 5,477,000 lb. in 1951, 5,850,000 lb. in 1952 and 6,475,000 lb. in 1953, produced principally in Quebec and Ontario.

Production of Concentrated Milk Products.—Products manufactured in concentrated milk plants and creameries equipped with powder manufacturing facilities are classified as whole-milk products and milk by-products. Production of whole-milk products in 1953 decreased 8 p.c. from 1952 production and concentrated milk by-products decreased 5 p.c.

23.—Production of Concentrated Milk Products, 1950-53

(Exclusive of Newfoundland)

Product	1950	1951	1952	1953
	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Concentrated Whole-Milk Products—				
Evaporated milk..................................	256,484	290,443	305,715	272,009
Condensed milk..................................	14,541	19,541	16,539	18,462
Whole-milk powder................................	15,679	17,404	16,035	18,744
Miscellaneous whole-milk products.................	7,742	13,159	11,906	14,105
Totals, Concentrated Whole-Milk Products...	**294,446**	**340,547**	**350,195**	**323,320**
Concentrated Milk By-products—				
Condensed skim milk.............................	4,366	6,282	4,741	4,037
Evaporated skim milk.............................	12,407	10,323	10,428	10,789
Skim-milk powder................................	53,263	52,748	88,229	83,042
Condensed buttermilk.............................	3,020	4,107	2,668	1,484
Buttermilk powder................................	5,006	5,428	6,606	6,565
Casein..	4,309	6,678	2,898	4,885
Totals, Concentrated Milk By-products[1]......	**87,924**	**95,215**	**122,856**	**116,591**
Grand Totals..............................	**382,370**	**435,762**	**473,051**	**439,911**

[1] Includes lactose and whey powder.

Ice-Cream Production.—The output of ice cream in Canada in 1953 was higher by 6 p.c. than in 1952; compared with 1941 there was an increase in production amounting to 104 p.c. The per capita disappearance of ice cream in 1953 amounted to 1·9 gal.

24.—Production of Ice Cream, by Province, 1950-53

Province	1950	1951	1952	1953	Province	1950	1951	1952	1953
	'000 gal.	'000 gal.	'000 gal.	'000 gal.		'000 gal.	'000 gal.	'000 gal.	'000 gal.
N'f'ld	..	..	..	..	Man	1,496	1,719	1,832	1,782
P.E.I	155	185	196	175	Sask	1,383	1,519	1,748	1,847
N.S	1,420	1,578	1,478	1,411	Alta	1,967	2,109	2,293	2,453
N.B	749	913	867	850	B.C	2,451	2,892	2,964	3,058
Que	4,762	5,227	5,702	6,564					
Ont	9,439	9,224	10,182	10,698	**Totals**	**23,822**	**25,366**	**27,262**	**28,838**

Domestic Disappearance of Dairy Products.—The estimated consumption of fluid milk and cream, on a milk basis, amounted to 4,533,000,000 pt. in 1953, 147,000,000 pt. higher than the 1952 consumption and 408,000,000 pt. above that of 1943. The average daily consumption per capita was 0·86 pt. in 1953 compared with 0·85 pt. in 1952. The peak daily per capita consumption of approximately 1 pt. was reached during the period 1944-46 when subsidies were in effect.

25.—Estimated Consumption of Milk and Cream (expressed as Milk), by Province, 1950-53, with Totals for 1946-53

Province and Year	Estimated Consumption	Daily Per Capita Consumption	Province and Year	Estimated Consumption	Daily Per Capita Consumption
	'000 pt.	pt.		'000 pt.	pt.
			Manitoba.............1950	223,473	0·80
Newfoundland	..	..	1951	220,923	0·78
			1952	223,210	0·76
			1953	231,083	0·78
Prince Edward Island...1950	36,058	1·03	Saskatchewan........1950	305,450	1·00
1951	36,845	1·03	1951	297,483	0·98
1952	36,717	0·97	1952	297,606	0·96
1953	36,912	0·95	1953	307,289	0·98
Nova Scotia...........1950	145,059	0·62	Alberta..............1950	268,248	0·80
1951	148,309	0·63	1951	283,045	0·83
1952	156,058	0·65	1952	288,009	0·81
1953	158,575	0·66	1953	295,205	0·81
New Brunswick........1950	137,365	0·74	British Columbia.....1950	297,278	0·72
1951	136,515	0·72	1951	289,626	0·68
1952	138,369	0·72	1952	288,680	0·66
1953	142,680	0·73	1953	296,474	0·66
Quebec.................1950	1,482,524	1·02			
1951	1,502,963	1·02	**Totals.............1946**	**4,547,637**	**1·01**
1952	1,587,528	1·04	**1947**	**4,465,570**	**0·97**
1953	1,649,635	1·06	**1948**	**4,262,270**	**0·91**
			1949	**4,357,279**	**0·90**
Ontario...............1950	1,367,521	0·84	**1950**	**4,262,976**	**0·87**
1951	1,375,721	0·82	**1951**	**4,291,430**	**0·86**
1952	1,369,903	0·79	**1952**	**4,386,080**	**0·85**
1953	1,415,297	0·79	**1953**	**4,533,150**	**0·86**

Domestic disappearance of butter (creamery, dairy and whey) was approximately 308,674,000 lb. in 1953, compared with 300,406,000 lb. in 1952 and 370,153,000 lb. in 1948. Per capita figures reflected this decline, falling from 28·73 lb. in 1948 to 20·82 lb. in 1952 and 20·88 lb. in 1953. The per capita consumption of margarine for 1952 and 1953 was 7·72 lb. and 7·46 lb., respectively.

The domestic disappearance of cheese (including cheddar, process and other) was about 89,154,000 lb. in 1953, an average of 6·03 lb. per capita. In the previous year the per capita average was 5·83 lb.

The domestic disappearance of concentrated whole-milk products increased from 20·30 lb. per capita in 1952 to 20·78 lb. in 1953.

Disappearance of all dairy products represented the equivalent of approximately 1,033 lb. of milk per capita in 1953 compared with 1,026 lb. in 1952.

26.—Domestic Disappearance of Dairy Products, 1950-53

(Exclusive of Newfoundland)

Product	1950		1951		1952		1953	
	Disappearance		Disappearance		Disappearance		Disappearance	
	Total	Per Capita	Total	Per Capita	Total	Per Capita	Total	Per Capita
	'000 lb.	lb.	'000 lb.	lb.	'000 lb.	lb.	'000 lb.	lb.
Fluid Milk and Cream—[1]								
Milk	4,645,793	347·71	4,682,467	343·09	4,776,899	339·85	4,929,972	342·41
Cream as product	185,539	13·89	181,801	13·32	186,461	13·27	194,724	13·52
Cream as milk	853,446	63·88	853,478	62·53	881,145	62·69	917,791	63·74
Totals, Milk and Cream[1]	5,449,239	411·59	5,535,945	405·62	5,658,044	402·54	5,847,763	406·15
Butter—								
Creamery	276,671	20·18	268,542	19·17	274,911	19·05	285,581	19·32
Dairy	27,352	1·99	26,830	1·91	23,770	1·65	21,289	1·44
Whey	2,187	0·16	1,935	0·14	1,725	0·12	1,804	0·12
Totals, Butter	306,210	22·33	297,307	21·22	300,406	20·82	308,674	20·88
Cheese—								
Cheddar	31,466	2·29	29,713	2·12	31,624	2·19	32,944	2·23
Process	36,409	2·66	39,551	2·82	41,178	2·85	44,304	3·00
Other	8,648	0·63	10,632	0·76	11,327	0·79	11,906	0·80
Totals, Cheese	76,523	5·58	79,896	5·70	84,129	5·83	89,154	6·03
Concentrated Whole-Milk Products—								
Evaporated	239,408	17·46	250,169	17·86	265,079	18·37	275,038	18·61
Condensed	10,976	0·80	10,712	0·76	11,017	0·76	12,835	0·87
Powdered	6,038	0·44	4,994	0·36	5,041	0·35	5,126	0·35
Totals, Concentrated Whole-Milk Products[2]	264,167	19·26	279,032	19·92	293,042	20·30	307,103	20·78
Concentrated Milk By-products—								
Evaporated	11,942	[3]	9,057	[3]	10,348	[3]	10,890	[3]
Condensed	4,574	[3]	6,087	[3]	4,836	[3]	4,109	[3]
Powdered	46,817	[3]	52,052	[3]	50,727	[3]	65,608	[3]
Totals, Concentrated Milk By-products[4]	80,779	[3]	91,534	[3]	84,670	[3]	94,720	[3]
All Dairy Products in Terms of Milk—								
Butter	**7,123,259**	**519·49**	**6,920,566**	**494·01**	**6,989,135**	**484·35**	**7,180,758**	**485·81**
Cheese	**760,184**	**55·44**	**774,352**	**55·28**	**824,403**	**57·13**	**861,949**	**58·31**
Concentrated	**619,011**	**45·14**	**649,125**	**46·34**	**702,987**	**48·72**	**733,601**	**49·63**
Grand Totals[5]	**14,426,853**	**1,062·67**	**14,336,234**	**1,033·82**	**14,650,901**	**1,025·75**	**15,112,464**	**1,032·94**

[1] Exclusive of Newfoundland.

[2] Includes malted milk, cream powder and substandard products of a variable fat content, items that do not appear separately in this table.

[3] Since the quantities used for human consumption and live-stock feeding cannot definitely be established, per capita figures cannot be calculated.

[4] Includes milk by-products items not separately listed, i.e., condensed buttermilk, powdered buttermilk, sugar of milk, casein and powdered whey.

[5] Includes ice cream in terms of milk.

Subsection 6.—Poultry and Eggs

Statistics of production and consumption of poultry meat and eggs are given in Tables 27 to 29.

27.—Numbers and Values of Poultry on Farms, by Province, as at June 1, 1952 and 1953

Province and Year		Hens and Chickens	Turkeys	Geese	Ducks	Totals
				Numbers		
		'000	'000	'000	'000	'000
Newfoundland[1]	1951	74	2	--	--	76
Prince Edward Island	1952	925	18	21	15	979
	1953	870	17	20	15	922
Nova Scotia	1952	1,480	28	4	3	1,515
	1953	1,530	25	4	3	1,562
New Brunswick	1952	1,145	44	5	5	1,199
	1953	1,090	50	6	5	1,151
Quebec	1952	9,875	440	13	49	10,377
	1953	9,800	375	14	53	10,242
Ontario	1952	20,700	692	137	166	21,695
	1953	23,400	568	147	168	24,283
Manitoba	1952	6,667	418	62	65	7,212
	1953	6,190	355	59	63	6,667
Saskatchewan	1952	8,680	587	43	74	9,384
	1953	7,900	470	45	63	8,478
Alberta	1952	8,420	640	80	95	9,235
	1953	8,280	530	78	91	8,979
British Columbia	1952	3,840	300	21	25	4,186
	1953	3,900	225	15	27	4,167
Totals	**1952**	**61,732**	**3,167**	386	**497**	**65,782**
	1953	**62,960**	**2,615**	388	488	**66,451**
				Values		
		$	$	$	$	$
Newfoundland[1]	1951	202,611	11,652	2,740	1,842	218,845
Prince Edward Island	1952	1,107,000	56,000	51,000	18,000	1,232,000
	1953	959,900	63,000	42,000	21,000	1,085,000
Nova Scotia	1952	2,200,000	88,000	12,000	4,000	2,304,000
	1953	2,358,000	88,000	12,000	5,000	2,463,000
New Brunswick	1952	1,602,000	166,000	18,000	8,000	1,794,000
	1953	1,500,000	150,000	15,000	7,000	1,672,000
Quebec	1952	13,657,000	1,471,000	33,000	66,000	15,227,000
	1953	13,164,000	1,078,000	36,000	92,000	14,370,000
Ontario	1952	25,817,000	2,229,000	349,000	231,000	28,626,000
	1953	32,092,000	1,490,000	359,000	224,000	34,165,000
Manitoba	1952	5,501,000	874,000	120,000	63,000	6,558,000
	1953	5,410,000	941,000	120,000	67,000	6,538,000
Saskatchewan	1952	7,083,000	1,390,000	88,000	82,000	8,643,000
	1953	6,319,000	1,057,000	97,000	81,000	7,554,000
Alberta	1952	7,886,000	1,776,000	186,000	133,000	9,981,000
	1953	7,323,000	1,215,000	177,000	104,000	8,819,000
British Columbia	1952	5,584,000	875,000	66,000	42,000	6,567,000
	1953	5,213,000	802,000	40,000	43,000	6,098,000
Totals	**1952**	**70,437,000**	**8,925,000**	**923,000**	**647,000**	**80,932,000**
	1953	**74,338,000**	**6,884,000**	**898,000**	**644,000**	**82,764,000**

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[1] Census data; no estimates are available for 1952 and 1953.

28.—Production, Utilization and Value of Farm Eggs, by Province, 1953

Province	Average Number of Layers[1]	Average Production per 100 Layers	Net Eggs Laid[2]	Sold[3]	Used on Farms[3]	Value per Dozen[4]	Total Value Sold and Used
	'000	No.	'000 doz.	'000 doz.	'000 doz.	cts.	$'000
Newfoundland	..	..	..	..	..	..	..
Prince Edward Island	429	18,994	6,764	5,825	939	42·8	2,894
Nova Scotia	707	21,155	12,429	9,371	3,058	52·0	6,467
New Brunswick	518	18,742	7,966	6,252	1,714	54·7	4,355
Quebec	3,285	19,712	53,738	41,584	12,154	50·7	27,255
Ontario	8,788	19,308	140,100	127,129	12,971	49·1	68,808
Manitoba	2,074	17,251	29,719	25,939	3,780	39·8	11,839
Saskatchewan	2,447	15,593	31,911	24,915	6,996	36·0	11,498
Alberta	2,601	17,009	36,685	28,558	8,127	39·6	14,512
British Columbia	1,524	19,241	24,106	22,006	2,100	50·5	12,178
Totals	**22,373**	**18,567**	**343,418**	**291,579**	**51,839**	**46·5**	**159,806**

[1] Hens and pullets over six months old. [2] Total laid less loss. [3] Includes eggs used for hatching. [4] Average value at farms for all purposes.

29.—Production and Domestic Disappearance of Eggs and Poultry, 1953

Item	Farm Production	Produced Elsewhere	Total Production	Total Supply	Domestic Disappearance	Per Capita Consumption
	'000 doz.	'000 doz.	'000 doz.	'000 doz.	'000 doz.	doz.
Eggs	**343,418**	**9,781**	**353,199**	**360,429**	**347,491**[1]	**23·4**
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	lb.
Poultry—						
Fowl and chickens	309,387	11,912	321,299	341,340	319,508	22·2
Turkeys	53,304	1,524	54,828	68,939	61,472	4·3
Geese	4,850	111	4,961	5,142	4,961	0·3
Ducks	3,876	100	3,976	4,814	4,566	0·3
Totals, Poultry	**371,417**	**13,647**	**385,064**	**420,235**	**390,507**	**27·1**

[1] Includes hatching eggs.

Subsection 7.—Fruit

Commercial fruit growing in Canada is confined almost exclusively to rather limited areas in the Provinces of Nova Scotia, New Brunswick, Quebec, Ontario and British Columbia. In Nova Scotia production is centred mainly in the Annapolis Valley and in New Brunswick it is centred in the St. John River Valley and Westmorland County. The fruit-growing districts of Quebec are the Montreal area, the North Shore area, the Eastern Townships and Quebec City district. In Ontario, fruit is grown in all the counties adjacent to the St. Lawrence River and the Great Lakes as far west as Georgian Bay, the Niagara district being the most productive. In British Columbia, the four well-defined fruit areas are the Okanagan Valley, the Fraser Valley, the Kootenay and Arrow Lakes district and Vancouver Island. The climate elsewhere in Canada is not suitable for commercial tree-fruit culture.

A marketing system has been developed for distributing fresh fruit from the specialized production areas to all parts of the country and a very large proportion of the deciduous fruit consumed in Canada is domestically grown. Considerable quantities of apples, strawberries and blueberries are exported annually. The United States is the most important export market for Canadian fruit. The import restrictions of the United Kingdom have greatly reduced exports of Canadian fruit to that market in recent years. In most of the producing areas, and particularly in the Annapolis Valley of Nova Scotia, the Niagara Peninsula of Ontario and the Okanagan Valley of British Columbia, fruit-growing is the principal form of agriculture and its prosperity is of paramount importance to the economy of those areas. Apples and small fruits are produced commercially in the four provinces named, but tender tree fruits and commercial vineyards are limited to Ontario and British Columbia.

Canning and processing industries have developed in the fruit-growing districts and, although the importance of the processing market varies with different fruits, it provides a valuable outlet for substantial proportions of most Canadian-grown fruit crops. Some canned fruits are exported.

30.—Estimated Commercial Production and Farm Value of Fruit, 1950-53

Kind of Fruit and Year	Quantity	Weight	Farm Value	Average Farm Price per Unit of Quantity[1]
	'000 bu.	'000 lb.	$'000	$
Apples—				
1950	16,166	727,470	12,467	0·77
1951	13,610	612,450	13,893	1·02
1952	12,049	542,205	17,391	1·44
1953	11,416	513,720	16,978	1·49
Pears—				
1950	864	43,200	1,877	2·17
1951	1,225	61,250	2,238	1·83
1952	1,303	65,150	2,371	1·82
1953	1,417	70,850	2,576	1·82
Plums and Prunes—				
1950	600	30,000	1,016	1·69
1951	692	34,600	865	1·25
1952	896	44,800	1,033	1·15
1953	783	39,150	1,198	1·53
Peaches—				
1950	1,222	61,100	2,754	2·25
1951	1,792	89,600	4,004	2·23
1952	2,917	145,850	5,152	1·77
1953	2,892	144,600	5,381	1·86
Apricots—				
1950	18	900	77	4·28
1951	38	1,900	116	3·05
1952	243	12,150	342	1·41
1953	210	10,500	401	1·91
Cherries—				
1950	359	17,950	2,065	5·75
1951	419	20,950	2,263	5·40
1952	505	25,250	2,113	4·18
1953	450	22,500	2,724	6·05
	'000 qt.	'000 lb.	$'000	$
Strawberries—				
1950	27,444	34,305	6,742	0·25
1951	26,204	32,755	5,662	0·22
1952	32,368	40,460	6,077	0·19
1953	28,303	35,379	6,464	0·23
Raspberries—				
1950	11,964	14,955	2,840	0·24
1951	11,772	14,715	3,133	0·27
1952	10,829	13,536	2,565	0·24
1953	12,486	15,608	3,087	0·25
	'000 lb.			
Loganberries—				
1950	1,197	1,197	166	0·14
1951	883	883	147	0·17
1952	1,240	1,240	158	0·13
1953	1,611	1,611	236	0·15
Grapes—				
1950	109,189	109,189	3,543	0·03
1951	88,602	88,602	2,813	0·03
1952	86,481	86,481	3,052	0·04
1953	80,958	80,958	3,508	0·04
Blueberries—				
1950[2]	4,427	4,427	649	0·15
1951	25,582	25,582	2,979	0·12
1952	25,170	25,170	3,384	0·13
1953[3]	18,301	18,301	3,180	0·17

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[1] Price to growers (to pickers in the case of blueberries) for unpacked fruit. [2] Excludes Quebec, for which no estimate was made; yield reduced by frost to about one-third 1949 crop. [3] Excludes British Columbia.

31.—Quantity and Value of Commercial Fruit Produced, by Province, 1950-53

Province	Quantity				Value[1]			
	1950	1951	1952	1953	1950	1951	1952	1953
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	$'000	$'000	$'000	$'000
Newfoundland	1,082	1,870	2,165	2,646	130	224	260	304
Prince Edward Island	760	900	1,589	1,485	76	99	168	178
Nova Scotia	105,299	73,877	79,724	53,080	2,068	1,769	2,229	2,111
New Brunswick	18,950	20,831	18,980	13,902	860	1,032	1,184	740
Quebec	91,147[2]	166,690	88,585	96,951	3,822[2]	7,099	6,839	7,240
Ontario	360,669	393,048	408,151	409,805	14,305	14,762	17,733	20,182
British Columbia	466,786	326,071	403,098	375,308[2]	12,935	13,128	15,225	14,978[2]
Totals	**1,044,693**	**983,287**	**1,002,292**	**953,177**	**34,196**	**38,113**	**43,638**	**45,733**

[1] Farm value (to pickers in the case of blueberries) for unpacked fruit. [2] Excludes blueberries.

Subsection 8.—Special Crops

Tobacco.—The chief tobacco-growing area of Canada is located in southern Ontario in the counties adjacent to Lake Erie. Most of the cigarette tobacco comes from that district. In Ontario in 1953, 90,800 acres of flue-cured or Bright Virginia-type tobacco and 1,096 acres of Burley tobacco were harvested. These are the most important types grown, though dark air-cured and fire-cured tobacco as well as cigar tobacco are grown on a more limited scale. The only other important production comes from Quebec. In 1953, 4,920 acres of flue-cured tobacco, 3,000 acres of cigar tobacco and 1,100 acres of pipe tobacco were harvested in that Province.

A study of Department of National Revenue reports on tax-paid withdrawals of tobacco products reveals changes in the smoking habits of Canadians during the past three decades. In 1922, the first year for which comparable figures are available, the Canadian per capita consumption of cigarettes was 229, cigars 20, cut tobacco 1·3 lb., plug tobacco 1·1 lb. and snuff about 1·3 oz. By 1953, the annual per capita consumption of cigarettes had increased to 1,421, cigars had dropped to 15·9, cut tobacco went up to 1·8 lb. and plug declined considerably.

32.—Acreages, Production and Values of the Commercial Crop of Leaf Tobacco, 1950-53, with Average for 1945-49

Year	Harvested Area	Average Yield per Acre	Total Production	Average Farm Price per lb.	Gross Farm Value
	acres	lb.	lb.	cts.	$
Av. 1945-49	109,709	1,106	121,373,000	36·8	44,655,000
1950	101,809	1,182	120,298,000	42·6	51,292,000
1951	118,970	1,293	153,792,000	43·1	66,213,000
1952	91,639	1,525	139,719,000	40·6	56,797,000
1953	101,088	1,377	139,190,000	42·8	59,617,000

33.—Acreages, Production and Values of the Commercial Crop of Leaf Tobacco, by Province, 1950-53, with Average for 1945-49

Year	Quebec			Ontario			British Columbia		
	Harvested Area	Production	Value	Harvested Area	Production	Value	Harvested Area	Production	Value
	acres	'000 lb.	$	acres	'000 lb.	$	acres	'000 lb.	$
Av. 1945-49...	11,293	10,359	2,898,000	98,315	110,904	41,730,800	101	111	34,800
1950..........	9,163	9,556	2,732,000	92,556	110,610	48,505,000	120	132	55,000
1951..........	9,080	8,631	2,600,000	109,740	144,975	63,544,000	150	186	69,000
1952..........	7,997	8,358	2,688,000	83,548	131,236	54,065,000	94	125	44,000
1953..........	9,020	9,865	3,261,000	91,996	129,253	56,328,000	72	72	28,100

34.—Acreages, Production and Values of the Commercial Crop of Leaf Tobacco, by Main Type, 1950-53, with Average for 1945-49

Type of Tobacco and Year	Harvested Area	Average Yield per Acre	Total Production	Average Farm Price per lb.	Gross Farm Value
	acres	lb.	lb.	cts.	$
Flue-cured............Av. 1945-49	90,787	1,102	100,070,000	38·9	38,944,000
1950	92,080	1,175	108,202,000	44·5	48,144,000
1951	111,300	1,294	144,055,000	44·2	63,729,000
1952	86,047	1,534	131,965,000	41·6	54,867,000
1953	95,792	1,382	132,352,000	43·7	57,837,000
Burley................Av. 1945-49	11,042	1,147	1,266,400	28·6	3,628,000
1950	4,652	1,217	5,660,000	30·0	1,700,000
1951	2,480	1,457	3,609,000	30·1	1,088,000
1952	1,406	1,673	2,352,000	29·6	695,000
1953	1,096	1,560	1,709,000	31·3	535,000
Cigar leaf............Av. 1945-49	4,310	1,140	4,914,000	22·8	1,119,000
1950	3,212	1,300	4,175,000	22·0	919,000
1951	3,000	1,243	3,728,000	22·9	853,000
1952	2,150	1,227	2,639,000	22·9	603,000
1953	3,000	1,277	3,830,000	24·2	926,000

Sugar Beets and Beetroot Sugar.—Sugar beets are grown commercially in Quebec, Ontario, Manitoba and Alberta and seven beet-sugar factories are located in these Provinces. In Quebec, commercial production, which centres in the St. Hilaire area of the Eastern Townships, started in 1944; in 1953, about 70,000 tons were harvested from 7,000 acres. The sugar-beet industry of Ontario is largely confined to the southwestern section of the Province and factories are located at Wallaceburg and Chatham. In 1953, Ontario factories processed about 246,000 tons harvested from over 23,000 acres.

Processing of sugar beets in Manitoba began in 1940 when 95,000 tons were handled. In 1953, the factory processed 162,000 tons from 17,000 harvested acres. In Alberta, where the industry has shown steady growth, sugar beets are produced under irrigation with yields averaging above those received in the other provinces. In 1953, the three Alberta factories, located in the south of the Province at Raymond, Picture Butte and Taber, handled 422,000 tons of beets from a harvested area of about 35,000 acres.

35.—Acreages, Yields and Values of Sugar Beets, and Quantities and Values of Refined Beetroot Sugar Produced, 1950-53, with Average for 1945-49

Year	Sugar Beets					Refined Beetroot Sugar Produced		
	Harvested Area	Yield per Acre	Total Yield	Average Price per Ton	Total Value	Quantity	Value	Price per lb.
	acres	tons	tons	$	$	lb.	$	cts.
Av. 1945-49..	66,000	10·48	690,000	12·74	8,788,000	185,275,000	14,865,000	8·0
1950.........	102,000	10·97	1,119,000	16·39	18,343,000	300,185,000	30,845,000	10·3
1951.........	93,000	10·36	965,000	14·96	14,443,000	247,753,000	26,446,000	10·7
1952.........	93,000	11·04	1,023,000	12·40	12,681,000	298,245,000	29,042,000	9·7
1953^p........	82,000	10·99	900,000	13·02	11,722,000	245,476,000	21,944,000	8·9

Apiculture.—Honey is produced commercially in all provinces of Canada, Ontario being the largest producer. There is a considerable movement of honey from the Prairie Provinces to other parts of Canada. In recent years exports have been small, the United States being the most important external market.

The 1951 crop was the largest since 1948, despite a reduction in the number of bee colonies. In 1952 and 1953 production was lower owing to further reductions in colony numbers and to lower yields after the extremely high production per colony experienced in 1951.

In order to facilitate storage, shipment and uniformity of quality, considerable quantities of Canadian honey are pasteurized. Beekeepers' marketing co-operatives are active in several provinces.

Bees are kept in some of the fruit-growing and greenhouse districts of the country chiefly for purposes of pollination.

36.—Beekeepers and Bee Colonies, Production and Value of Honey and Beeswax, 1950-53, with Average for 1945-49

Year	Bee-keepers	Bee Colonies	Honey				Beeswax		Value of Honey and Wax
			Average Production per Hive	Total Production	Average Price per lb. to Producers	Total Value	Production	Value	
	No.	No.	lb.	lb.	cts.	$	lb.	$	$
Av. 1945–49	36,740	539,200	63	33,982,000	19	6,457,000	474,000	213,000	6,670,000
1950....	22,180	430,000	66	28,351,000	15	4,282,000	425,000	166,000	4,448,000
1951....	18,900	406,300	101	40,909,000	16	6,445,000	590,000	294,000	6,739,000
1952....	15,950	385,600	81	31,230,000	15	4,680,000	463,000	217,000	4,897,000
1953....	13,950	341,300	77	26,384,000	16	4,099,000	390,000	174,000	4,273,000

37.—Honey Production, by Province, 1950-53, with Average for 1945-49

Province	Av. 1945-49	1950	1951	1952	1953
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland............................	...	...	...	...	...
Prince Edward Island..................	49	46	71	91	68
Nova Scotia.............................	98	81	143	125	137
New Brunswick........................	139	68	151	156	124
Quebec.....................................	4,065	3,041	5,044	4,398	2,972
Ontario....................................	10,378	8,350	20,500	14,900	10,000
Manitoba..................................	5,392	5,891	5,400	3,360	4,830
Saskatchewan...........................	6,001	4,881	3,600	2,500	3,247
Alberta.....................................	6,957	4,851	4,500	4,900	3,856
British Columbia......................	903	1,142	1,500	800	1,150
Totals..........................	**33,982**	**28,351**	**40,909**	**31,230**	**26,384**

Maple Sugar and Syrup.—Maple syrup is produced in the Provinces of Nova Scotia, New Brunswick, Quebec and Ontario. The bulk of the crop comes from the Eastern Townships of Quebec, a district famous both in Canada and the United States as the centre of the maple-products industry. Virtually all of the maple products exported are sent to the United States with the larger proportion moving as sugar, although substantial quantities of syrup are also shipped.

Most of the syrup sold in Canada is marketed in one-gallon cans direct to the consumer from the producer but a considerable amount of both sugar and syrup is sold each year to processing firms.

38.—Estimated Production of Maple Sugar and Maple Syrup, by Province, 1950-53, with Average for 1945-49

Province and Year	Maple Sugar			Maple Syrup			Total Value, Sugar and Syrup
	Quantity	Average Price per lb.	Value	Quantity	Average Price per gal.	Value	
	lb.	cts.	$	gal.	$	$	$
Nova Scotia—							
Av. 1945-49[1]	16,000	44·0	7,000	7,000	3·85	25,000	33,000
1950	13,000	47·0	6,000	7,000	3·76	26,000	32,000
1951	15,000	52·0	8,000	5,000	4·18	21,000	29,000
1952	11,000	54·0	6,000	6,000	4·13	25,000	31,000
1953	6,000	53·0	3,000	2,000	4·24	8,000	11,000
New Brunswick—							
Av. 1945-49[1]	91,000	46·0	42,000	12,000	4·12	49,000	91,000
1950	86,000	43·0	37,000	14,000	4·00	56,000	93,000
1951	90,000	46·0	41,000	10,000	4·27	43,000	84,000
1952	114,000	50·0	57,000	12,000	4·30	52,000	109,000
1953	38,000	47·0	18,000	5,000	4·85	24,000	42,000
Quebec—							
Av. 1945-49[1]	2,270,000	32·0	736,000	1,863,000	3·34	6,224,000	6,960,000
1950	1,692,000	37·0	626,000	2,273,000	3·44	7,819,000	8,445,000
1951	1,500,000	39·0	585,000	1,750,000	3·55	6,212,000	6,797,000
1952	2,020,000	42·0	848,000	2,777,000	3·33	9,247,000	10,095,000
1953	1,266,000	39·0	494,000	1,688,000	3·69	6,229,000	6,723,000
Ontario—							
Av. 1945-49[1]	29,000	38·0	11,000	373,000	3·82	1,422,000	1,433,000
1950	33,000	40·0	13,000	507,000	4·05	2,053,000	2,066,000
1951	44,000	43·0	19,000	379,000	4·29	1,626,000	1,645,000
1952	16,000	47·0	8,000	459,000	4·21	1,932,000	1,940,000
1953	14,000	52·0	7,000	121,000	4·32	523,000	530,000
Totals—							
Av. 1945-49[1]	**2,407,000**	**33·1**	**796,000**	**2,254,000**	**3·42**	**7,721,000**	**8,517,000**
1950	**1,824,000**	**37·4**	**682,000**	**2,801,000**	**3·55**	**9,954,000**	**10,636,000**
1951	**1,649,000**	**39·6**	**653,000**	**2,144,000**	**3·69**	**7,902,000**	**8,555,000**
1952	**2,161,000**	**42·5**	**919,000**	**3,254,000**	**3·46**	**11,256,000**	**12,175,000**
1953	**1,324,000**	**39·4**	**522,000**	**1,816,000**	**3·74**	**6,784,000**	**7,306,000**

[1] Five-year average prices are derived from actual figures, but quantities and values are rounded to the nearest thousand.

Fibre Flax.—The demand for fibre flax was heavy during World War II when exports increased to many times the pre-war volume. After the War, however, exports of fibre flax to Canada's principal market, the United Kingdom, dropped sharply and acreage devoted to this crop decreased; in 1950 it was at the lowest level since 1931. In 1951 and 1952 acreage and production increased but both declined again in 1953.

39.—Acreages, Yields and Values of Flaxseed, Fibre and Tow, 1950-53, with Average for 1945-49

Year	Area	Production			Values			
		Seed	Fibre	Green Tow	Seed	Fibre	Green Tow	Total
	acres	bu.	lb.	tons	$	$	$	$
Av. 1945-49....	**13,991**	**57,000**	**2,852,000**	**136**	**301,000**	**751,000**	**9,000**	**1,061,000**
1950...........	4,569	25,000	946,000	—	133,000	294,000	—	427,000
1951...........	7,555	42,000	2,660,000	—	210,000	538,000	—	748,000
1952...........	7,166	35,000	1,470,000	—	158,000	246,000	—	404,000
1953...........	3,000	25,000	580,000	—	68,000	96,000	—	164,000

Subsection 9.—Prices of Agricultural Produce

The monthly index of farm prices of agricultural products was designed to measure changes occurring in the average prices farmers receive at the farm from the sale of farm products. In comparing current index numbers with those before August 1953, certain points should be considered. Western grain prices used in the construction of the index before Aug. 1, 1953, are final prices for all grains. Since Aug. 1, 1953, only initial prices are available for western wheat, oats and barley. Any subsequent participation payments made on the 1953 crops will be added to the prices currently used and the index revised upward accordingly.

40.—Average Index Numbers of Farm Prices of Agricultural Products, by Province, 1944-53, and by Month, 1952 and 1953

(1935-39=100)

NOTE.—A description of this index, its coverage and the methods used will be found in DBS *Quarterly Bulletin of Agricutural Statistics* for October-December, 1946.

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total[1]
1944 Averages..............	**172·7**	**173·3**	**171·9**	**171·7**	**169·1**	**173·1**	**171·4**	**176·9**	**179·5**	**172·4**
1945 Averages..............	**196·7**	**180·8**	**195·3**	**179·5**	**174·6**	**188·4**	**192·6**	**196·2**	**187·8**	**185·7**
1946 Averages..............	**194·2**	**191·2**	**207·7**	**196·9**	**187·9**	**209·4**	**217·3**	**219·9**	**199·2**	**204·1**
1947 Averages..............	**180·1**	**184·9**	**199·6**	**213·7**	**202·1**	**225·9**	**226·1**	**231·9**	**207·1**	**215·8**
1948 Averages..............	**236·6**	**214·1**	**250·3**	**265·6**	**258·6**	**259·6**	**247·1**	**262·9**	**240·2**	**255·8**
1949 Averages..............	**204·1**	**210·5**	**220·5**	**261·3**	**257·8**	**262·8**	**248·8**	**265·6**	**245·1**	**255·4**
1950 Averages..............	**189·6**	**206·5**	**216·8**	**260·9**	**265·1**	**274·4**	**251·5**	**276·2**	**244·3**	**260·8**
1951 Averages..............	**236·4**	**243·2**	**250·8**	**305·6**	**315·0**	**301·6**	**268·7**	**308·0**	**287·1**	**296·8**
1952										
January....................	343·7	283·2	329·7	314·9	313·1	293·1	261·7	290·8	310·8	296·5
February..................	319·2	273·9	318·7	307·2	297·5	281·4	252·3	279·6	304·4	284·8
March.....................	348·9	278·9	355·7	301·3	290·1	277·2	247·7	268·9	299·4	279·5
April.......................	394·6	286·6	377·5	295·0	285·0	271·2	244·1	265·6	296·5	276·3
May........................	414·5	287·8	386·6	285·6	278·3	258·8	235·6	255·6	296·2	268·8
June.......................	493·5	307·3	434·0	293·6	289·3	259·7	237·4	258·0	294·7	276·1
July........................	348·3	272·2	371·5	292·6	292·7	264·6	241·5	259·7	298·5	275·2
August....................	378·6	271·1	377·7	284·7	292·7	265·1	252·3	268·2	288·1	278·2
September...............	309·6	269·1	309·5	280·1	279·9	259·9	249·3	264·6	288·8	269·9
October...................	294·3	258·3	298·3	274·2	272·4	256·5	242·5	255·8	280·4	262·6
November................	293·4	256·7	294·3	275·9	273·2	257·1	243·4	257·6	280·5	263·5
December.................	280·9	255·6	280·7	277·8	270·9	257·2	243·0	258·8	279·8	262·8
1952 Averages..............	**351·6**	**275·1**	**344·5**	**290·2**	**286·3**	**266·8**	**245·9**	**265·3**	**293·2**	**274·5**

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[1] Exclusive of Newfoundland.

40.—Average Index Numbers of Farm Prices of Agricultural Products, by Province, 1944-53, and by Month, 1952 and 1953—concluded

(1935-39=100)

Year and Month	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total[1]
1953										
January	279·4	260·2	283·7	280·4	272·5	263·1	242·8	257·6	276·3	263·8
February	238·2	246·3	256·5	278·0	268·8	257·0	241·1	254·6	276·8	259·6
March	207·9	241·7	222·4	278·6	267·2	257·5	240·2	254·8	271·7	257·8
April	164·3	226·0	195·3	266·4	258·0	253·7	237·7	252·2	270·1	250·8
May	169·3	219·7	200·3	269·5	260·3	253·7	239·9	256·3	266·5	253·0
June	193·2	227·3	207·7	279·2	270·1	260·1	240·8	265·2	274·6	260·4
July	178·2	225·2	214·1	275·6	265·6	253·5	238·2	257·4	268·3	255·7
August	194·1	233·0	218·0	275·1	267·9	221·0	200·1	227·4	271·3	240·3
September	177·6	224·9	199·8	267·3	262·9	218·5	198·1	223·8	265·9	235·6
October	170·8	224·1	200·6	270·6	265·3	217·1	196·9	220·8	269·7	235·8
November	166·3	221·9	183·7	264·2	254·1	211·9	193·4	216·0	265·0	229·0
December	165·8	215·0	178·2	268·6	253·6	213·6	193·2	217·7	264·7	229·5
1953 Averages	**192·1**	**230·4**	**213·4**	**272·8**	**263·9**	**240·1**	**221·9**	**242·0**	**270·1**	**247·6**

[1] Exclusive of Newfoundland.

Monthly prices of grain and monthly prices of live stock are shown in DBS *Quarterly Bulletin of Agricultural Statistics*

41.—Yearly Average Cash Prices per Bushel of Canadian Cereals—Basis, in Store at Fort William and Port Arthur, Ont.—Crop Years Ended July 31, 1944-53

NOTE.—Statistics for 1926-43 are given in the corresponding tables of previous editions of the Year Book.

Year Ended July 31—	Averages in Cents and Eighths per Bushel				
	Wheat,[1] No. 1 N.	Oats,[2] No. 2 C.W.	Barley,[2] No. 2 C.W. —6 Row	Rye,[3] No. 2 C.W.	Flaxseed,[3] No. 1 C.W.
	cts.	cts.	cts.	cts.	cts.
1944	135	67/3	79/6	115/4	250[4]
1945	143/6	61/4	87/3	126/2	275[4]
1946	183/3	61/4	84/6	223/7	275[4]
1947	183/3	66/2	93/4	287/6	325[4]
1948	183/3	90	119/7	374/5	550[5]
1949	183/3	78/1	124/3	140	403/1[6]
1950	183/3	90/4	158/7	146	371/6
1951	185/4	95/4	147/4	184/5	441/4
1952	182/2	90/6	132/5	193/5	428/1
1953	185/6	79/7	133/5	158/2	328/5

[1] Initial payments plus additional payments to producers. [2] Based on cash closing prices, Winnipeg Grain Exchange. From Aug. 1, 1944, to Oct. 22, 1947, prices of oats and barley remained at or near the government-imposed ceiling prices. From Oct. 23, 1947, to July 31, 1949, open market trading again prevailed. Equalization payments to producers are included for the crop years 1943–44 to 1947–48, inclusive. [3] Average cash closing price, Winnipeg Grain Exchange, except where otherwise noted. [4] Fixed price to growers. [5] $5 fixed price to growers plus 50 cents participation payment. [6] Winnipeg Grain Exchange renewed trading in flaxseed cash and futures on Aug. 16, 1948. The Canadian Wheat Board was authorized to buy all flaxseed offered to it during the 1948–49 crop year on the basis of $4 per bushel for No. 1 C.W. in store Fort William-Port Arthur, Ont.

42.—Yearly Average Prices per 100 lb. of Canadian Live Stock at Principal Markets, 1949-53

NOTE.—Classification of live stock was changed in February 1949 as follows: steers up to 1,050 lb. changed to steers up to 1,000 lb.; steers over 1,050 lb. to steers over 1,000 lb.; lambs, good handy weights to lambs, good; sheep, good handy weights to sheep, good.

Item	Toronto					Montreal				
	1949	1950	1951	1952	1953	1949	1950	1951	1952	1953
	$	$	$	$	$	$	$	$	$	$
Steers, up to 1,000 lb., good	20·45	24·74	32·60	25·15	20·25	20·99	26·67	32·75	26·90	20·39
Steers, up to 1,000 lb., medium	19·26	23·45	31·51	23·85	18·74	18·75	24·63	31·04	23·88	18·60
Steers, up to 1,000 lb., common	17·29	22·06	29·46	19·85	15·53	16·07	20·66	27·18	19·36	14·00
Steers, over 1,000 lb., good	21·29	26·72	33·49	25·85	20·11	21·28	26·83	33·00	26·54	20·38
Steers, over 1,000 lb., medium	20·51	25·16	32·46	24·00	18·55	19·69	25·30	31·45	23·77	18·47
Steers, over 1,000 lb., common	19·26	22·80	31·04	20·10	16·07	17·19	22·15	27·97	17·95	14·39
Heifers, good	19·99	24·35	31·85	24·55	19·82	19·58	25·04	31·38	23·38	17·03
Heifers, medium	18·84	23·78	30·94	23·10	18·17	16·82	22·64	28·01	21·34	15·55
Calves, fed, good	21·71	25·44	32·84	25·65	20·86	21·37	27·33	33·41	27·17	20·94
Calves, fed, medium	20·15	23·78	31·19	23·80	18·95	19·30	23·78	31·26	23·53	15·72
Cows, good	15·77	20·07	26·95	18·55	13·12	15·64	20·21	26·55	18·85	13·63
Cows, medium	14·55	18·59	25·43	16·80	12·27	14·07	17·82	24·51	16·48	11·81
Bulls, good	17·76	21·93	29·30	18·50	13·89	16·63	21·44	28·31	18·55	14·46
Stocker and feeder steers, good	18·45	26·36	33·65	23·00	19·35	[1]	[1]	[1]	21·30	20·50
Stocker and feeder steers, common	16·37	23·61	30·99	20·15	16·04	[1]	[1]	[1]	15·20	17·16
Stock cows and heifers, good	14·98	[1]	[1]	[1]	[1]	[1]	[1]	[1]	[1]	16·93
Stock cows and heifers, common	14·00	16·66	23·92	17·05	11·56	[1]	[1]	[1]	15·27	12·00
Calves, veal, good and choice	25·51	29·61	36·55	27·90	24·62	24·64	27·11	36·60	26·55	23·30
Calves, veal, common and medium	20·89	24·20	31·96	21·85	19·33	20·09	22·28	33·48	22·84	19·13
Hogs, Grade B-1, dressed	30·20	28·98	32·85	25·70	30·40	30·30	29·03	32·95	25·75	30·90
Lambs, good	23·75	28·33	33·95	26·05	23·37	22·50	27·86	32·60	25·05	22·73
Lambs, common	18·21	23·97	30·28	21·10	18·63	16·31	22·18	26·88	17·40	17·12
Sheep, good	10·87	14·32	19·77	14·80	9·52	9·40	13·78	19·82	13·23	8·95

	Winnipeg					Edmonton				
	1949	1950	1951	1952	1953	1949	1950	1951	1952	1953
	$	$	$	$	$	$	$	$	$	$
Steers, up to 1,000 lb., good	20·06	24·55	31·70	24·00	18·25	19·03	24·30	31·75	23·45	18·42
Steers, up to 1,000 lb., medium	17·86	22·37	29·42	21·12	16·03	17·54	23·18	30·18	21·97	16·69
Steers, up to 1,000 lb., common	15·58	19·84	26·60	17·74	12·87	14·84	19·96	26·76	17·37	12·30
Steers, over 1,000 lb., good	20·01	24·38	31·82	23·93	18·02	19·31	24·39	31·84	23·82	18·14
Steers, over 1,000 lb., medium	17·60	22·94	29·40	20·69	15·57	17·78	23·21	30·12	21·93	16·57
Steers, over 1,000 lb., common	15·37	20·20	26·65	17·61	12·47	15·41	20·64	27·00	18·37	13·18
Heifers, good	17·77	22·43	29·24	20·61	15·81	16·73	21·92	29·94	21·38	16·62
Heifers, medium	16·00	20·90	26·82	18·06	13·51	15·19	21·65	27·77	19·65	14·76
Calves, fed, good	20·27	24·64	32·03	23·79	18·78	19·01	23·51	31·45	22·78	17·99
Calves, fed, medium	18·29	22·35	29·79	20·63	16·18	17·48	21·38	29·46	20·94	16·84
Cows, good	14·54	18·91	25·74	16·00	11·48	13·50	18·47	25·51	16·45	11·26
Cows, medium	13·04	17·20	23·79	13·78	9·86	12·55	17·15	23·84	14·60	9·45
Bulls, good	16·71	21·32	28·24	15·59	12·30	15·35	20·49	27·70	15·76	11·77
Stocker and feeder steers, good	17·46	24·56	30·45	19·55	15·01	16·07	24·34	30·60	20·60	15·54
Stocker and feeder steers, common	14·75	21·18	27·24	15·22	11·05	13·26	20·34	26·13	15·94	11·92
Stock cows and heifers, good	14·23	19·69	26·84	17·41	12·47	12·56	18·88	26·22	17·02	12·50
Stock cows and heifers, common	11·96	16·67	23·23	13·87	9·17	11·44	16·22	22·91	12·05	9·09
Calves, veal, good and choice	23·71	29·00	35·45	26·10	22·68	19·76	27·24	36·30	26·90	22·86
Calves, veal, common and medium	17·56	22·04	28·81	19·51	15·73	15·69	22·74	28·75	19·51	14·87
Hogs, Grade B-1, dressed	28·49	27·76	30·85	24·45	27·40	29·86	28·40	32·70	24·60	28·78
Lambs, good	21·89	26·62	32·05	22·85	19·85	20·53	24·06	31·45	22·45	20·19
Lambs, common	16·82	20·64	26·56	18·98	15·27	15·73	20·91	26·87	17·82	17·13
Sheep, good	7·86	10·28	12·53	9·64	5·32	7·63	11·52	15·43	12·42	9·41

[1] No sales reported.

Subsection 10.—Food Consumption

Consumption of Major Foods.—A study of consumption of the major foods was undertaken during World War II by the Dominion Bureau of Statistics in recognition of the national and international significance of such information. Though data on total consumption of certain commodities such as wheat, alcoholic beverages, meats, etc., had been available for a considerable period, it was found necessary to establish a per capita level of consumption of a wide range of products on a comparable basis.

The figures represent available supplies, including production and imports, adjusted for change of stocks, exports, marketing losses and industrial uses. All calculations have been made at the retail stage of distribution, except for meats, where the figures are worked out at the wholesale stage. The amount of food actually eaten would be somewhat lower than indicated because of losses and waste occurring after the products reached the hands of the consumer. It should also be pointed out that there are minor discrepancies in certain of the figures since statistics of storage stocks in the hands of retailers and consumers were not available. However, the figures represent the best summary of food consumption data that has been compiled for Canada.

All basic foods have been classified under 13 main commodity groups. Totals for each group have been computed using common denominators for the group, for example: milk solids (dry weight) in the dairy-products group; fat content for fats and oils; and fresh equivalent for fruits. All foods have been included in their basic form, that is, as flour, fat, sugar, etc., rather than in more highly manufactured forms.

The series in Table **43** represents the official estimates of yearly supplies of food moving into consumption, expressed in pounds per capita, for the years 1935-39 as an average for comparison with the years 1951, 1952, and 1953.

43.—Per Capita Supplies of Food Moving into Consumption, 1951-53, and Average for 1935-39

Kind of Food and Weight Base	Pounds per Capita per Annum				Percentages of 1935-39 Average		
	Average 1935-39	1951	1952	1953p	1951	1952	1953p
Cereals—							
Flour (including rye flour)[1].....Retail wt.	184·8	152·1	151·6	145·4	82·3	82·0	78·7
Oatmeal and rolled oats........ "	7·3	6·3	5·5	5·2	86·3	75·3	71·2
Pot and pearl barley........... "	0·3	0·3	0·3	0·3	100·0	100·0	100·0
Corn meal and flour............ "	1·4	0·8	0·6	0·6	57·1	42·9	42·9
Buckwheat flour............... "	0·2	0·1	0·1	0·1	50·0	50·0	50·0
Rice.......................... "	4·3	4·8	3·0	4·1	111·6	69·8	95·3
Breakfast food................. "	7·4	7·1	6·4	6·5	95·9	86·5	87·8
Totals, Cereals.............Retail wt.	**205·7**	**171·5**	**167·5**	**162·2**	**83·4**	**81·4**	**78·9**
Potatoes—							
Potatoes, white................Retail wt.	192·3	[2]	146·8	157·5	—	76·3	81·9
Potatoes, sweet................ "	0·6	0·7	0·5	0·5	116·7	83·3	83·3
Totals, Potatoes............Retail wt.	**192·9**	—	**147·3**	**158·0**	—	**76·4**	**81·9**
Sugars and Syrups—							
Sugar.......................Refined wt.	94·7	96·3	97·7	96·6	101·7	103·2	102·0
Maple sugar....................Retail wt.	1·8	1·1	1·4	0·5	61·1	77·8	27·8
Other.......................... "	8·2	8·3	7·1	6·6	101·2	86·6	80·5
Totals, Sugars and Syrups... Sugar content	**101·7**	**102·8**	**103·8**	**101·3**	**101·1**	**102·1**	**99·6**
Starch.........................Retail wt.	**2·5**	**1·6**	**1·6**	**1·6**	**64·0**	**64·0**	**64·0**

For footnotes, *see* end of table, p. 434.

43.—Per Capita Supplies of Food Moving into Consumption, 1951-53, and Average for 1935-39—continued

Kind of Food and Weight Base	Pounds per Capita per Annum				Percentages of 1935-39 Average		
	Average 1935-39	1951	1952	1953p	1951	1952	1953p
Pulses and Nuts—							
Dry beans.....Retail wt.	3·7	5·4[3]	3·6[3]	3·7[3]	145·9	97·3	100·0
Dry peas..... "	5·7	2·1	1·4	1·8	36·8	24·6	31·6
Peanuts.....Shelled wt.	2·2	2·7	2·7	2·8	122·7	122·7	127·3
Tree nuts..... "	1·1	1·1	1·1	1·3	100·0	100·0	118·2
Cocoa.....Green beans	3·7	2·4	3·1	3·5	64·9	83·8	94·6
Totals, Pulses and Nuts...Retail wt. incl. shelled wt. of nuts	**14·5**	**12·5**	**10·3**	**11·3**	**86·2**	**71·0**	**77·9**
Fruit—							
Tomatoes and Citrus Fruit—							
Tomatoes, fresh.....Retail wt.	15·4	19·3	18·8	20·2	125·3	122·1	131·2
Tomato products.....Net wt. canned	10·0	16·0	13·3	14·8	160·0	133·0	148·0
Citrus fruit, fresh.....Retail wt.	25·1	34·5	37·5	39·0	137·5	149·4	155·4
Citrus fruit, canned.....Net wt. canned	0·5	6·9	9·2	10·6	1,380·0	1,840·0	2,120·0
Other Fruit—							
Fresh.....Retail wt.	40·5	61·6	68·1	65·4	152·1	168·1	161·5
Canned.....Net wt. canned	6·3	11·7	12·6	14·6	185·7	200·0	231·7
Dried.....Processed wt.	8·3	6·7	6·9	6·6	80·7	83·1	79·5
Juice.....Net wt. canned	..	3·9	4·2	4·1	..	..	..
Frozen.....Retail wt.	0·2	0·4	0·5	1·0	200·0	250·0	500·0
Totals, Fruit.....Fresh equiv.	**138·7**	**200·6**	**212·1**	**218·0**	**144·6**	**152·9**	**157·2**
Vegetables—							
Fresh—							
Cabbage and greens.....Retail wt.	16·2	19·1	19·9	18·9	117·9	122·8	116·7
Carrots..... "	15·4	12·9	11·6	11·2	83·8	75·3	72·7
Legumes..... "	6·2	2·5	3·4	3·8	40·3	54·8	61·3
Other..... "	29·8	34·8	36·1	37·6	116·8	121·1	126·2
Canned.....Net wt. canned	10·8	18·7	18·4	18·8	173·1	170·4	174·1
Frozen.....Retail wt.	..	0·6	0·8	1·0	..	..	..
Totals, Vegetables.....Fresh equiv.	**78·4**	**88·6**	**90·2**	**91·3**	**113·0**	**115·1**	**116·5**
Oils and Fats—							
Margarine.....Retail wt.	..	7·4	7·7	7·5	..	..	..
Lard..... "	3·9	8·1	9·4	7·8	207·7	241·0	200·0
Shortening..... "	10·6	8·2	8·3	9·2	77·4	78·3	86·8
Salad and cooking oil..... "	1·8	2·4	2·7	2·5	133·3	150·0	138·9
Butter..... "	31·0	22·6	20·8	20·9	72·9	67·1	67·4
Totals, Oils and Fats.....Fat content	**41·4**	**42·9**	**43·4**	**42·4**	**103·6**	**104·8**	**102·4**
Meat—							
Pork.....Carcass wt.	39·8	67·8	65·9	57·0	170·4	165·6	143·2
Beef..... "	54·7	43·8	44·7	59·1	80·1	81·7	108·0
Veal..... "	10·5	7·7	6·7	9·1	73·3	63·8	86·7
Mutton and lamb..... "	5·6	2·6	1·9	2·3	46·4	33·9	41·1
Offal.....Edible wt.	5·8	5·3	5·5	5·2	91·4	94·8	89·7
Canned meat.....Net wt. canned	1·4	4·9	6·2	5·6	350·0	442·9	400·0
Totals, Meat.....Carcass wt.	**118·3**	**133·7**	**132·9**	**140·1**	**113·0**	**112·3**	**118·4**
Poultry and Fish—							
Hens and chickens.....Retail wt. dressed	15·6	20·7[4]	24·8[4]	22·2[4]	132·7	159·0	142·3
Other poultry..... "	2·8	3·9[4]	4·8[4]	4·9[4]	139·3	171·4	175·0
Shellfish.....Fresh edible wt.	0·4	0·4	0·4	0·4	100·0	100·0	100·0
Fish (other), fresh, frozen and cured.....Filleted wt.	8·8	8·7	8·8	8·4	98·9	100·0	95·5
Fish, canned.....Net wt. canned	2·7	4·7	4·7	4·7	174·1	174·1	174·1
Totals, Poultry and Fish...Edible wt.	**22·4**	**27·8**	**30·8**	**29·0**	**124·1**	**137·5**	**129·5**
Eggs.....Fresh egg equiv.	**30·7**	**34·6[4]**	**34·0[4]**	**35·1[4]**	**112·7**	**110·7**	**114·3**

For footnotes, *see* end of table, p. 434.

43.—Per Capita Supplies of Food Moving into Consumption, 1951-53, and Average for 1935-39—concluded

Kind of Food and Weight Base	Pounds per Capita per Annum				Percentages of 1935-39 Average		
	Average 1935-39	1951	1952	1953p	1951	1952	1953p
Milk and Cheese—							
Cheddar cheese[5]...............Retail wt.	3·7	4·9	5·1	5·3	132·4	137·8	143·2
Other cheese.................. "	0·2	0·8	0·8	0·8	400·0	400·0	400·0
Cottage cheese................ "	0·2	0·7	0·7	0·7	350·0	350·0	350·0
Evaporated whole milk........ "	6·1	17·9	18·4	18·6	293·4	301·6	304·9
Condensed whole milk......... "	0·6	0·8	0·8	0·9	133·3	133·3	150·0
Whole milk powder............ "	0·1	0·4	0·4	0·4	400·0	400·0	400·0
Condensed skim milk.......... "	0·4	0·4	0·3	0·3	100·0	75·0	75·0
Skim milk powder............. "	1·8	3·7	3·5	4·4	205·6	194·4	244·4
Evaporated skim milk......... "	0·1	0·7	0·7	0·7	700·0	700·0	700·0
Condensed buttermilk......... "	0·1	0·3	0·2	0·1	300·0	200·0	100·0
Milk in ice cream............. "	10·9	32·6	33·0	33·0	299·1	302·8	302·8
Powdered buttermilk.......... "	0·2	0·3	0·5	0·4	150·0	250·0	200·0
Fluid whole milk[6]............. "	408·5	405·6[4]	402·5[4]	406·1[4]	99·3	98·5	99·4
Totals, Milk and Cheese...Milk solids	**52·0**	**63·0**	**62·9**	**64·1**	**121·2**	**121·0**	**123·3**
Beverages—							
Tea...............................Primary distribution wt.	3·5	3·0	3·2	3·1	85·7	91·4	88·6
Coffee.......................Green beans	3·7	6·3	6·8	7·2	170·3	183·8	194·6
Totals, Beverages.............Primary distribution wt.	**7·2**	**9·3**	**10·0**	**10·3**	**129·2**	**138·9**	**143·1**

[1] Fluctuations in apparent per capita flour consumption are owing partly to unavailability of complete data on flour inventories in all positions. [2] Not available pending revision of intercensal estimates. [3] Includes soybean flour. [4] Exclusive of Newfoundland. [5] Includes process cheese. [6] Includes cream expressed as milk.

Consumption of Meats.—Production of meats from slaughter, total supply, distribution and per capita consumption of meats and lard are shown in Table 44. All estimates are on a carcass-weight basis except canned meats which are in terms of product.

44.—Supply, Distribution and Consumption of Meats and Lard, 1949-53, with Average for 1935-39

NOTE.—Estimates for 1949-51 are not strictly comparable with those for 1952 and 1953, since revisions necessitated by the 1951 Census of Agriculture have not yet been completed for earlier years.

Item	Average 1935-39	1949	1950	1951	1952	1953p
Beef—						
Animals slaughtered in Canada '000	1,347·0	1,904·5	1,729·3	1,472·0	1,459·1	1,837·5
Estimated dressed weight[1].... '000 lb.	618,556	866,844	790,395	708,546	726,638	902,966
On hand, Jan. 1............... "	22,684	35,313	23,415	22,174	19,497	32,961
Imports[2]..................... "	158[3]	9,335	10,587	10,112	9,289	11,537
Totals, Supply................ "	641,398	911,492	824,397	740,832	755,424	947,464
Exports[2]...................... "	10,899	105,121	90,740	96,605	68,072	28,920
Used for canning.............. "	1,406	17,415	14,582	11,701	9,199	9,651
On hand, Dec. 31............. "	24,040	23,415	22,174	19,497	32,961	35,697
TOTALS, CONSUMPTION.......... "	605,053	765,541	696,901	613,029	645,192	873,196
CONSUMPTION PER CAPITA....... lb.	54·7	56·5	50·3	43·8	44·7	59·1

For footnotes, *see* end of table, p. 436.

44.—Supply, Distribution and Consumption of Meats and Lard, 1949-53, with Average for 1935-39—continued

Item		Average 1935-39	1949	1950	1951	1952	1953p
Veal—							
Animals slaughtered in Canada	'000	1,333·6	1,287·1	1,387·4	1,166·3	959·2	1,318·3
Estimated dressed weight[1]....	'000 lb.	116,372	124,303	125,958	110,407	98,149	137,994
On hand, Jan. 1...............	"	3,452	6,894	6,327	3,356	4,171	3,891
Imports......................	"	[4]	[4]	[4]	[4]	[4]	[4]
Totals, Supply................	"	119,824	131,197	132,285	113,763	102,320	141,885
Exports......................	"	—	[4]	[4]	[4]	[4]	[4]
Used for canning.............	"	22	1,554	1,605	1,182	1,736	1,454
On hand, Dec. 31.............	"	3,785	6,327	3,356	4,171	3,891	5,433
TOTALS, CONSUMPTION..........	"	116,017	123,316	127,324	108,410	96,693	134,998
CONSUMPTION PER CAPITA.......	lb.	10·5	9·1	9·2	7·7	6·7	9·1
Pork—							
Animals slaughtered in Canada	'000	5,165·1	7,169·5	7,650·4	7,961·6	8,864·1	6,892·1
Estimated dressed weight[5]....	'000 lb.	620,522	910,568	963,757	1,005,695	1,181,593	915,204
On hand, Jan. 1...............	"	34,511	32,439	35,445	31,292	39,000	68,813
Imports[2].....................	"	7,394	6,685	5,733	22,456	4,677	481
Totals, Supply................	"	662,427	949,692	1,004,935	1,059,443	1,225,270	984,498
Exports[2].....................	"	179,630	76,060	85,099	21,382	15,041	55,320
Used for canning.............	"	4,602	35,494	46,835	48,754	190,911	55,935
On hand, Dec. 31.............	"	37,863	35,445	31,292	39,000	68,813	30,755
TOTALS, CONSUMPTION..........	"	440,332	802,693	841,709	950,307	950,505	842,488
CONSUMPTION PER CAPITA.......	lb.	39·8	59·2	60·8	67·8	65·9	57·0
Mutton and Lamb—							
Animals slaughtered in Canada	'000	1,543·0	1,023·1	855·7	824·8	595·9	679·3
Estimated dressed weight[1]....	'000 lb.	61,417	43,641	35,691	35,973	26,195	28,984
On hand, Jan. 1...............	"	6,190	6,346	5,023	3,894	3,584	4,482
Imports[2].....................	"	422	29	486	3,499	2,661	4,745
Totals, Supply................	"	68,029	50,016	41,200	43,366	32,440	38,211
Exports[2].....................	"	248	3,906	2,761	2,737	46	52
Used for canning.............	"	37	246	220	205	350	310
On hand, Dec. 31.............	"	5,965	5,023	3,894	3,584	4,482	3,530
TOTALS, CONSUMPTION..........	"	61,779	40,841	34,325	36,840	27,562	34,319
CONSUMPTION PER CAPITA.......	lb.	5·6	3·0	2·5	2·6	1·9	2·3
Canned Meats—							
Estimated production.........	'000 lb.	5,624	45,973	53,485	54,545	144,183	55,494
Imports......................	"	12,292	11,099	10,969	23,977	14,185	11,543
Change in stocks[6]............	"	..	−3,850	+94	+879	+54,442	−39,017
Totals, Supply................	"	17,916	60,922	64,360	77,643	103,926	106,054
Exports......................	"	1,999	10,009	8,430	9,258	14,874	22,748
TOTALS, CONSUMPTION..........	"	15,917	50,913	55,930	68,385	89,052	83,306
CONSUMPTION PER CAPITA.......	lb.	1·4	3·8	4·0	4·9	6·2	5·6
Offal—							
Estimated production.........	'000 lb.	64,611	85,916	84,446	79,739	83,128	83,009
Imports......................	"	..	729	1,483	4,348	1,594	4,121
Totals, Supply................	"	64,611	86,645	85,929	84,087	84,722	87,130
Exports......................	"	..	7,270	5,657	7,223	2,535	6,680
Used for canning.............	"	583	3,161	3,258	2,923	2,493	3,509
TOTALS, CONSUMPTION..........	"	64,028	76,214	77,014	73,941	79,694	76,941
CONSUMPTION PER CAPITA.......	lb.	5·8	5·6	5·6	5·3	5·5	5·2

For footnotes, *see* end of table, p. 436.

44.—Supply, Distribution and Consumption of Meats and Lard, 1949-53, with Average for 1935-39—concluded

Item		Average 1935-39	1949	1950	1951	1952	1953p
Lard—							
Estimated production[7]........	'000 lb.	63,237	98,019	109,652	117,874	177,254	130,942
Imports.....................	"	56	14,548	13,031	12,045	1,265	6,790
Change in stocks............	"	+278	+627	−629	+2,615	+2,404	−7,534
Totals, Supply...............	"	63,015	111,940	123,312	127,304	176,115	145,266
Exports.....................	"	19,485	208	126	84	14,289	1,426
TOTALS, CONSUMPTION..........	"	43,530	111,732	123,186	127,220	161,826	143,840
CONSUMPTION PER CAPITA.......	lb.	3·9	8·2	8·9	9·1	11·2	9·7

[1] Edible meat excluding offal. [2] Basis cold dressed carcass weight. [3] Includes edible offal of beef and veal. [4] Quantity small; included with beef. [5] Edible meat excluding fats and offal. [5] The positive changes represent deductions from the available supply during a given year and therefore are subtracted; similarly, negative changes represent an increase in disappearance. [7] Includes rendered pork fat.

Section 5.—Agricultural Statistics of the Census

Summary agricultural statistics, recorded by the Census of 1951, are given in the 1954 Canada Year Book, pp. 438-447. They include information relating to occupied farms classified by province, tenure and size, farm operators classified by age and province, farm machinery, farm electrification and farm areas. More detailed information may be obtained from The Ninth Census of Canada, 1951 *Census* Vol. VI, Parts I and II.

Section 6.—International Crop Statistics

Tables **45** and **46** are based on estimates published in March 1954 by the Foreign Agricultural Service, United States Department of Agriculture, and give the acreages and production of wheat and the production of oats and barley for the harvests of 1952 and 1953, with averages for the years 1945-49, in the leading countries of the world.

45.—Estimated Acreages and Production of Wheat Harvested in 1952 and 1953 in Specified Countries, with Average for 1945-49

Continent and Country	Acreages			Production		
	Average 1945-49	1952	1953	Average 1945-49	1952	1953
	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.
North America—						
Canada..................	24,717	25,995	25,513	366,349	687,922	613,965
Mexico..................	1,244	1,466	1,557	15,522	17,450	23,880
United States............	71,024	70,926	67,608	1,202,396	1,298,957	1,168,536
Totals, North America[1]..	**97,040**	**98,450**	**94,740**	**1,585,000**	**2,005,000**	**1,807,000**
Europe—						
Austria..................	528	570	535	10,800	17,959	18,450
Belgium..................	371	411	411	14,733	20,760	20,110
Denmark..................	175	183	175	8,704	11,060	10,650
Finland..................	420	380	355	8,966	9,400	9,500
France...................	10,354	11,000	10,600	238,200	310,000	325,000

For footnote, *see* end of table.

45.—Estimated Acreages and Production of Wheat Harvested in 1952 and 1953 in Specified Countries, with Average for 1945-49—concluded

Continent and Country	Acreages			Production		
	Average 1945-49	1952	1953	Average 1945-49	1952	1953
	'000 acres	'000 acres	'000 acres	'000 bu.	'000 bu.	'000 bu.
Europe—concluded						
Greece	1,917	2,382	2,581	24,750	38,580	52,000
Ireland	561	280	385	17,746	9,800	13,100
Italy	11,742	12,000	12,100	227,200	295,000	325,000
Luxembourg	32	47	44	800	1,540	1,340
Netherlands	262	202	161	11,109	12,160	9,530
Norway	91	51	47	2,670	1,460	1,620
Portugal	1,665	1,711	1,746	14,190	20,360	23,500
Spain	9,640	10,625	10,625	116,700	170,000	125,000
Sweden	749	821	965	23,222	28,740	36,585
Switzerland	223	226	211	7,800	9,300	8,000
United Kingdom	2,148	2,030	2,217	77,505	86,130	99,456
Western Germany	2,283	2,921	2,832	67,420	120,200	116,100
Other Europe[2]	18,530	20,160	20,200	317,000	402,000	415,000
Totals, Europe[1]	**66,120**	**71,010**	**71,200**	**1,265,000**	**1,640,000**	**1,705,000**
Union of Soviet Socialist Republics (Europe and Asia)	**82,200**	..	..	**885,000**	..	..
Asia—						
China	54,447	..	..	864,280	800,000	..
India[3]	23,312	23,235	24,041	212,336	215,340	240,000
Iran	..	..	..	70,791	75,000	78,000
Iraq	1,593	..	..	14,424	17,640	..
Japan	1,655	1,779	1,693	34,325	56,480	50,500
Lebanon	166	161	166	2,133	1,800	1,890
Pakistan[3]	10,370	10,220	9,617	130,018	114,240	105,000
Syria	1,957	2,220	2,300	18,762	26,000	27,550
Turkey	9,436	13,400	15,700	125,089	234,000	290,000
Totals, Asia[1]	**111,750**	**115,060**	**123,070**	**1,525,000**	**1,605,000**	**1,670,000**
Africa—						
Algeria	3,566	4,389	4,122	29,900	43,790	39,500
Egypt	1,618	1,455	1,858	42,633	41,000	56,800
French Morocco	2,621	3,530	3,269	21,792	29,400	37,700
Tunisia	1,907	2,856	2,029	12,320	25,240	21,000
Union of South Africa	2,416	3,120	..	15,067	19,650	..
Totals, Africa[1]	**13,740**	**16,930**	**15,910**	**134,000**	**173,000**	**191,000**
South America—						
Argentina	11,493	13,590	13,000	193,740	279,250	225,000
Brazil	876	..	..	11,283	20,000	..
Chile	1,980	1,925	2,000	35,628	40,900	34,900
Peru	280	..	..	3,798	..	..
Uruguay	1,060	1,225	1,670	13,124	17,000	28,000
Totals, South America[1]	**16,320**	**19,220**	**19,360**	**263,000**	**370,000**	**325,000**
Oceania—						
Australia	12,662	10,185	11,000	177,742	195,210	199,000
New Zealand	140	139	125	5,241	4,525	4,600
Totals, Oceania	**12,802**	**10,324**	**11,125**	**182,983**	**199,735**	**203,600**
World Totals[1]	**399,970**	**445,990**	**452,400**	**5,840,000**	**7,295,000**	**7,150,000**

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[1] Estimated totals, which in the case of production are rounded to millions, include allowances for any missing data for countries shown and data for producing countries not shown. [2] Includes Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Roumania. [3] Figures for the periods shown are not strictly comparable since figures for 1952 and 1953 include allowances for non-reporting areas not included for the earlier period shown, but are included in estimated total for Asia.

46.—Estimated Production of Oats and Barley Harvested in 1952 and 1953 in Specified Countries, with Average for 1945-49

Continent and Country	Oats			Barley		
	Average 1945-49	1952	1953	Average 1945-49	1952	1953
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.
North America—						
Canada	341,612	466,805	405,580	144,688	291,379	862,065
Mexico	2,152	3,520	3,800	6,032	7,560	7,800
United States	1,376,527	1,260,127	1,216,416	273,306	226,014	241,015
Totals, North America[1]	**1,720,000**	**1,730,000**	**1,626,000**	**424,000**	**525,000**	**511,000**
Europe—						
Austria	17,424	27,300	28,800	7,127	12,500	15,050
Belgium	37,888	31,900	31,500	9,388	12,520	13,360
Denmark	67,820	66,140	56,490	64,345	97,880	100,600
Finland	35,275	58,000	66,500	8,500	10,800	15,000
France	221,821	231,130	245,964	52,500	79,420	104,190
Greece	6,058	8,040	11,500	7,359	9,800	11,870
Ireland	48,040	41,000	37,500	6,739	11,620	9,800
Italy	30,513	35,000	42,000	9,467	12,250	14,340
Luxembourg	2,370	2,720	2,620	—	—	—
Netherlands	24,125	33,660	34,940	7,147	11,000	12,820
Norway	11,137	11,100	12,500	4,014	6,790	9,760
Portugal	8,270	9,580	9,400	3,835	6,070	6,120
Spain	34,390	37,700	27,000	83,528	102,330	73,500
Sweden	58,000	56,110	68,300	8,252	15,100	21,700
Switzerland	5,568	5,180	5,000	2,745	2,820	2,750
United Kingdom	204,692	194,040	197,470	91,895	108,920	109,240
Western Germany	144,500	180,270	175,970	43,740	80,710	95,140
Other Europe[2]	313,000	355,000	354,000	172,000	208,000	200,000
Totals, Europe[1]	**1,293,000**	**1,402,000**	**1,430,000**	**600,000**	**805,000**	**835,000**
Union of Soviet Socialist Republics (Europe and Asia)	**722,000**	..	..	**272,000**	..	..
Asia—						
China	51,335	..	..	322,244	..	..
India[3]	—	—	—	106,255	100,000	107,500
Iran	—	—	—	37,157	38,600	37,700
Iraq	—	—	—	29,502	29,850	50,000
Japan	6,431	9,500	9,710	56,046	99,100	96,200
Lebanon	—	—	—	1,165	690	690
Manchuria	—	—	—	5,550	..	..
Pakistan[3]	—	—	—	6,922	6,400	5,300
Syria	574	..	..	11,135	10,500	13,500
Turkey	14,000	27,900	28,450	68,675	146,470	160,750
Totals, Asia[1]	**84,000**	**111,010**	**108,000**	**692,000**	**800,000**	**825,000**
Africa—						
Algeria	7,694	9,810	8,000	28,120	48,000	35,000
Egypt	—	—	—	8,605	5,500	4,800
French Morocco	2,376	4,230	..	47,322	56,000	70,000
Tunisia	958	830	..	7,901	16,100	8,300
Union of South Africa	8,415	..	..	1,740	..	..
Totals, Africa[1]	**20,000**	**24,000**	**23,000**	**107,000**	**150,000**	**145,000**

For footnotes, *see* end of table.

46.—Estimated Production of Oats and Barley Harvested in 1952 and 1953 in Specified Countries, with Average for 1945-49—concluded

Continent and Country	Oats			Barley		
	Average 1945-49	1952	1953	Average 1945-49	1952	1953
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.	'000 bu.
South America—						
Argentina	47,782	87,430	58,500	35,576	54,900	40,000
Chile	5,310	7,300	6,550	4,030	6,500	6,300
Uruguay	2,840	2,700	..	846	1,020	..
Totals, South America[1]	**57,000**	**98,000**	**69,000**	**53,000**	**78,000**	**64,000**
Oceania—						
Australia	33,249	54,530	43,750	16,854	36,580	38,400
New Zealand	3,669	2,980	1,500	2,223	2,400	2,600
Totals, Oceania	**36,918**	**57,510**	**45,250**	**19,077**	**38,980**	**41,000**
World Totals[1]	**3,930,000**	**4,200,000**	**4,025,010**	**2,170,000**	**2,745,000**	**2,745,000**

[1] Estimated totals, which are rounded to millions, include allowances for any missing data for countries shown and for other producing countries not shown.

[2] Comprises Albania, Bulgaria, Czechoslovakia, Eastern Germany, Hungary, Poland and Roumania.

[3] Figures for the periods shown are not strictly comparable since figures for 1952 and 1953 include allowances for non reporting areas not included for the earlier period shown, but included in estimated total for Asia.

CHAPTER X.—FORESTRY*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Land is the basis of the Canadian economy and wise use of the land is the foundation of good forestry. In addition to providing the greatest amount of the most usable woods as economically as possible, good forestry will aid in maintaining agricultural lands against drought and erosion; will continuously protect water-catchment areas and assure supplies of water; will furnish cover for game and fur-bearing animals; and will give Canadians and their tourist guests opportunity for recreation which only the forests can provide.

Section 1.—Forest Regions†

The forests of Canada cover a vast area in the north temperate climatic zone. Wide variations in physiographic, soil and climatic conditions cause marked differences in the character of the forests in different parts of the country; hence eight fairly well defined forest regions may be recognized. These are shown on the accompanying map and are listed as follows, with the relative proportion of the total area of all forest regions occupied by each:—

Region	*Percentage of Total Regional Area*
Boreal	80·1
Great Lakes-St. Lawrence	7·9
Subalpine	4·0
Montane	2·5
Coast	2·2
Acadian	2·0
Columbia	0·9
Deciduous	0·4
TOTAL	100·0

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* Sections of this Chapter that deal with forestry and forest administration have been revised in the Forest Economics Section, Forestry Branch, Department of Northern Affairs and National Resources. Sections dealing with forest and allied industries, except as otherwise noted, have been revised in the Forestry Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

† A more detailed discussion of forest regions is given in Bulletin No. 89, *A Forest Classification for Canada*, by W. E. D. Halliday, obtainable from the Forestry Branch, Department of Northern Affairs and National Resources, Ottawa. Accounts of variations in Canadian physiography, climate, etc., are given in Chapter I of this volume.

Boreal Forest Region.—This region comprises the greater part of the forested area of Canada, forming a continuous belt from the Atlantic Ocean westward to the Rocky Mountains and northwestward to Alaska. The white and black spruces are characteristic tree species; other prominent conifers are tamarack, which ranges throughout the region, balsam fir and jack pine in the eastern and central portions, and alpine fir and lodgepole pine in the western and northwestern parts. Although the region is primarily coniferous, there is a general admixture of broad-leaved trees, such as the white birches and poplars; these play an important part in the central and south-central portions, particularly as the region grades into the Grassland Formation of the prairies. In turn, the proportion of barrens (non-forested rock, muskeg and tundra) increases in the northern parts until the region finally merges into the Tundra Formation. In the southern parts of the eastern portions of the region there is considerable intrusion of species from the Great Lakes-St. Lawrence Forest Region, such as the white and red pines, yellow birch, sugar maple, black ash and eastern white cedar.

Great Lakes-St. Lawrence Forest Region.—Along the Great Lakes and the St. Lawrence River valley is a forest of a very mixed nature, characterized by the white and the red pines, eastern hemlock and yellow birch. With these are associated certain dominant broad-leaved species common to the Deciduous Forest Region, such as sugar maple, red maple, northern red oak, basswood and white elm. Other species with wide range are the eastern white cedar, the largetooth aspen and, to a lesser extent, beech, white oak, butternut and white ash. Boreal species, such as the white and the black spruces, balsam fir, jack pine, poplar and white birch intrude from the north, and red spruce from the Acadian Forest is abundant in certain eastern portions of the Region.

Acadian Forest Region.—The greater part of the Maritime Provinces contains a forest closely related to both the Great Lakes-St. Lawrence and the Boreal Regions. The characteristic species is red spruce, with which are associated balsam fir, yellow birch and sugar maple, with some red pine, white pine, beech and hemlock. Other species of wide distribution are the black and the white spruces, northern red oak, white elm, black ash, red maple, white birch, wire birch and the poplars. Eastern white cedar and jack pine, however, are restricted almost entirely to the western half of the Region.

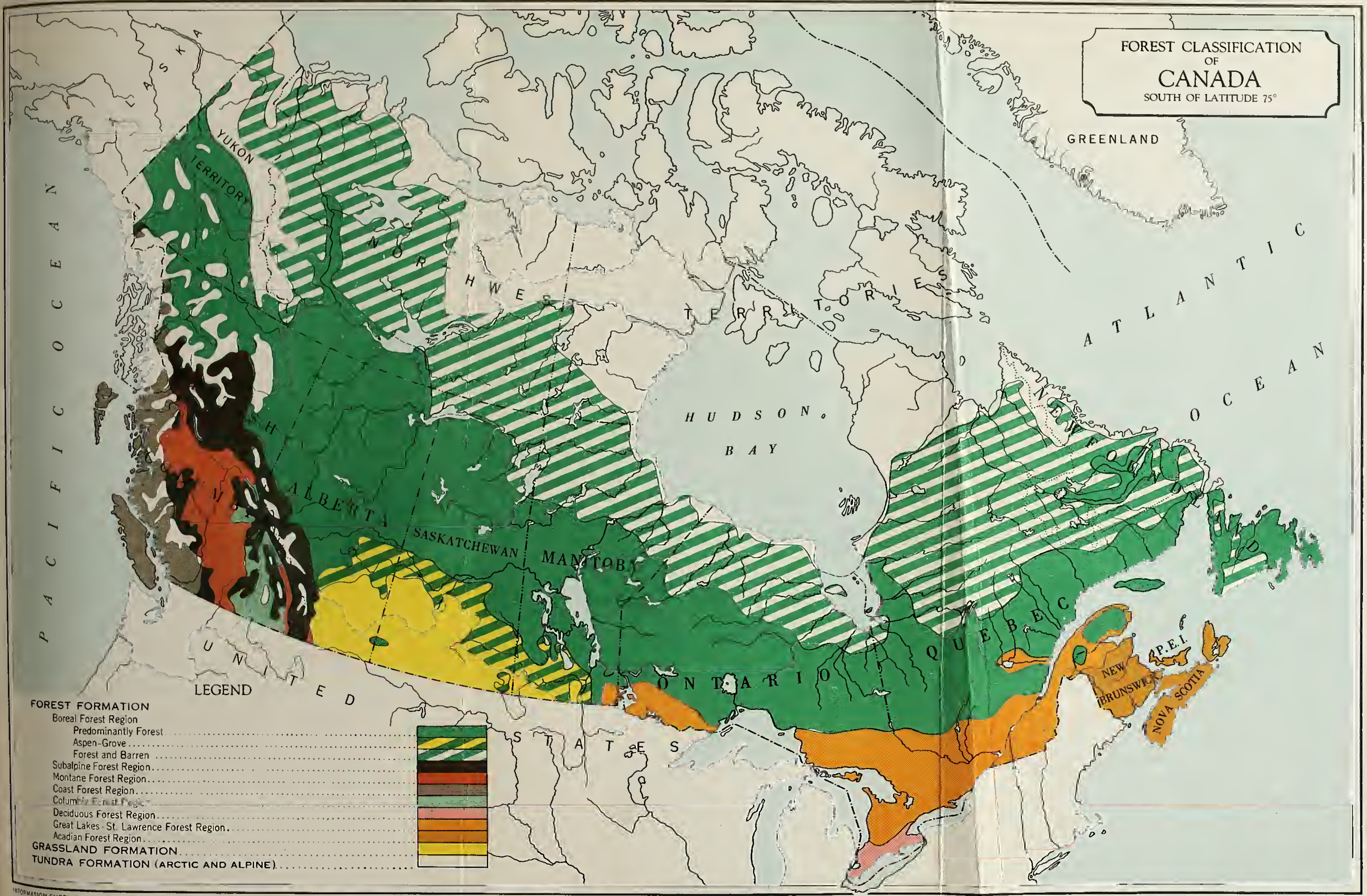
Deciduous Forest Region.—A small portion of this forest, widespread in the eastern United States, is found in southwestern Ontario between Lakes Huron, Erie and Ontario. Here, with the broad-leaved trees common to the Great Lakes-St. Lawrence Forest Region, such as sugar maple, beech, white elm, basswood, red ash, white oak and butternut, are scattered a number of other broad-leaved species which have their northern limits in this locality. Among these are the tulip-tree, cucumber-tree, papaw, red mulberry, Kentucky coffee-tree, redbud, black gum, blue ash, sassafras, mockernut, and pignut hickories, and scarlet, black and pin oaks. In addition there are black walnut, sycamore and swamp white oak, which are largely confined to this Region. Conifers are few, mainly scattered white pine, tamarack, red juniper and hemlock.

Subalpine Forest Region.—This is a coniferous forest found on the higher slopes of the mountains east of the Coast Ranges. It extends northward to the divide between the drainage of the Skeena, Nass and Peace Rivers, and that of the Stikine and Liard Rivers. The characteristic species are Engelmann spruce, alpine fir and lodgepole pine. There is a close relationship with the Boreal Region, from which the black and the white spruces and aspen intrude, more particularly in the northern parts. There is also some entry of Douglas fir from the Montane Forest, and western hemlock, western red cedar and amabilis fir from the Coast Forest. Other species found are western larch, whitebark pine and limber pine.

Columbia Forest Region.—A large part of the Kootenay River valley, the upper valleys of the Thompson and Fraser Rivers, and the Quesnel Lake area of British Columbia contain a coniferous forest closely resembling that of the Coast Region. Western red cedar and western hemlock are the characteristic species. Associated with these are Douglas fir, which is of general distribution, and, in the southern parts, western white pine, western larch and grand fir. Engelmann spruce from the Subalpine Region is important in the upper Fraser Valley and is found to some extent at the upper levels of the forest in the remainder of the region. Towards lower elevations in the west and in parts of the Kootenay Valley, the forest grades into the Montane Region and, in a few places, into the Grassland Formation.

Montane Forest Region.—This region occupies a large part of the interior uplands of British Columbia as well as part of the Kootenay Valley and a small area on the east side of the Rocky Mountains. It is a northern extension of the typical forest of much of the western mountain system in the United States, and comes in contact with the Coast, Columbia and Subalpine Forests. Ponderosa pine is a characteristic species of the southern portions, to which it is restricted. Douglas fir is found throughout but more particularly in the central and southern parts. Lodgepole pine and aspen are generally present, the latter being well represented in the north-central portions. Engelmann spruce and alpine fir from the Subalpine Region become important constituents in the northern parts, together with white birch. The Boreal white spruce also enters here. Extensive bunch grass and sage brush communities of the Grassland Formation are found in many of the river valleys.

Coast Forest Region.—This is part of the Pacific Coast forest of North America. Essentially coniferous, it consists principally of western red cedar and western hemlock, with the addition of Douglas fir in the south and Sitka spruce in the north. Amabilis fir and yellow cedar occur widely and, together with mountain hemlock and alpine fir, are common towards the timberline. Western white pine is found in the southern parts. Broad-leaved trees, such as black cottonwood, red alder and broadleaf maple have a limited distribution in this region. Arbutus and garry oak occur in Canada only on the southeast coast of Vancouver Island and the adjacent mainland. These are species that have entered from the Montane Forest in the United States.



FOREST CLASSIFICATION
OF
CANADA
SOUTH OF LATITUDE 75°

GREENLAND
ALASKA
YUKON TERRITORY
NORTHWEST TERRITORIES
HUDSON BAY
ALBERTA
SASKATCHEWAN
MANITOBA
BRITISH COLUMBIA
ONTARIO
QUEBEC
NEWFOUNDLAND
NEW BRUNSWICK
P.E.I.
NOVA SCOTIA
PACIFIC OCEAN
ATLANTIC OCEAN
UNITED STATES
LEGEND
FOREST FORMATION
Boreal Forest Region
Predominantly Forest
Aspen-Grove
Forest and Barren
Subalpine Forest Region
Montane Forest Region
Coast Forest Region
Columbia Forest Region
Deciduous Forest Region
Great Lakes - St. Lawrence Forest Region
Acadian Forest Region
GRASSLAND FORMATION
TUNDRA FORMATION (ARCTIC AND ALPINE)

INFORMATION SUPPLIED BY THE FORESTRY BRANCH, DEPARTMENT OF NORTHERN AFFAIRS AND NATURAL RESOURCES.

DRAWN AND PRINTED AT THE SURVEYS AND MAPPING BRANCH, OTTAWA, 1954.

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Section 2.—Native Tree Species

There are more than 150 tree species in Canada, of which 31 are conifers, commonly called 'softwoods'. About two-thirds of these softwoods are of commercial importance. Of the large number of deciduous or 'hardwood' species, only about 10 p.c. is of any great commercial value to the wood-using industries. About 82 p.c. of the volume of merchantable timber is made up of softwood species.

The dominant species existing in each forest region are given in Section 1, pp. 440-442. Detailed information is contained in Forestry Branch Bulletin No. 61, *Native Trees of Canada,** published by the Department of Northern Affairs and National Resources.

Section 3.—Forest Resources

The forested area of Canada (exclusive of Labrador) is estimated at 1,485,870 sq. miles, or 42 p.c. of the total land area.

Over 44 p.c. of the total forested area of Canada is classified as "non-productive", i.e., incapable of producing crops of merchantable wood. However, these forests do provide valuable protection for drainage basins and shelter for game and fur-bearing animals.

Of the productive portion of the forested area, 578,000 sq. miles are considered to be now accessible for commercial operations. Further details are given in Chapter I, Table **1**, p. 20. The economically inaccessible productive forests contain much valuable timber suitable for lumber and pulpwood. At present it is not economical to conduct cutting operations on these areas but, as low-cost methods of transportation are developed, as accessible forested areas become depleted, and as the demand for wood products increases, these inaccessible productive forests will be brought progressively into commercial development. Owing generally to less favourable climatic conditions, the productive capacity of these inaccessible timberlands is expected to be lower than that of the accessible areas now being logged.

The predominant part that lumber and other forest products have played in the development of Canada has resulted in a widespread tendency to evaluate the forests in terms of timber alone. A growing realization of the economic importance of the non-timber values, however, is bringing about increasing recognition of their true value and thus developing a broader concept of forestry.

Inventories of the forest resources are made periodically by provincial forest authorities and, with their co-operation, the Forestry Branch of the Department of Northern Affairs and National Resources compiles the National Forest Inventory. The latest estimates of the total stand of timber, by province and region, appear in Table **1**. These estimates are subject to constant revision as more accurate and complete inventories are compiled.

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* Obtainable from the Queen's Printer, Ottawa, price $1.50.

1.—Estimate of Total Stand of Timber, by Type and Size, and by Province and Region, 1953

Province and Region	Conifers			Broad-leaved			Totals		
	Saw Timber	Smaller Material	Total Equivalent Volume	Saw Timber	Smaller Material	Total Equivalent Volume	Saw Timber	Smaller Material	Total Equivalent Volume
	Million ft. b.m.	'000 cords	Million cu. ft.[1]	Million ft. b.m.	'000 cords	Million cu. ft.[1]	Million ft. b.m.	'000 cords	Million cu. ft.[1]
Accessible									
Newfoundland[2]	3,127	31,902	3,337	—	—	—	3,127	31,902	3,337
Prince Edward Island	65	560	61	20	240	24	85	800	85
Nova Scotia	4,849	23,167	2,939	1,261	5,363	708	6,110	28,530	3,647
New Brunswick	5,000	60,000	6,100	1,500	30,000	2,850	6,500	90,000	8,950
TOTALS, ATLANTIC PROVINCES[2]	13,041	115,629	12,437	2,781	35,603	3,582	15,822	151,232	16,019
Quebec	38,181	450,495	45,928	14,019	176,108	17,773	52,200	626,603	63,701
Ontario	62,378	495,452	54,589	14,109	196,944	19,562	76,487	692,396	74,151
TOTALS, CENTRAL PROVINCES	100,559	945,947	100,517	28,128	373,052	37,335	128,687	1,318,999	137,852
Manitoba	815	9,900	1,004	1,630	19,090	1,949	2,445	28,990	2,953
Saskatchewan	5,721	47,087	5,147	11,081	39,602	5,582	16,802	86,689	10,729
Alberta	7,000	74,400	7,724	2,080	36,000	3,476	9,080	110,400	11,200
TOTALS, PRAIRIE PROVINCES	13,536	131,387	13,875	14,791	94,692	11,007	28,327	226,079	24,882
British Columbia	401,652	93,144	88,248	5,377	—	1,075	407,029	93,144	89,323
Northwest Territories	881	34,500	3,109	480	16,500	1,499	1,361	51,000	4,608
Yukon Territory	1,196	18,000	1,769	250	9,000	815	1,446	27,000	2,584
Totals, Accessible[2]	**530,865**	**1,338,607**	**219,955**	**51,807**	**528,847**	**55,313**	**582,672**	**1,867,454**	**275,268**
Totals, Inaccessible[2]	**193,021**	**814,909**	**107,871**	**6,304**	**151,912**	**14,174**	**199,325**	**966,821**	**122,045**
Canada[2]	**723,886**	**2,153,516**	**327,826**	**58,111**	**680,759**	**69,487**	**781,997**	**2,834,275**	**397,313**

[1] Cubic volumes do not include wood in stumps and unusable tops.

[2] Excludes Labrador.

Forest Land Tenure.—Private individuals or corporations own 7 p.c. of Canada's total forest land. The remaining 93 p.c. is still in the possession of the Crown in the right of the Federal Government or of the provinces: rights to cut Crown timber under lease or licence have been granted on 15 p.c. of the total forest land. Some of the unalienated land has already been logged and has reverted to the Crown but, in the main, it is located in the inaccessible and less accessible areas.

Farm woodlots on the 623,000 farms across Canada cover about 22,780,000 acres (Census of 1951)—13 p.c. of the total farm area and over 6 p.c. of the total accessible productive forest. These small wooded tracts, ranging in size from three or four acres to 200 or more acres, are among the most accessible forests in Canada. Further, the woodlots of eastern Canada are, in general, highly productive because they lie in the southern parts of the country and frequently occupy soils that are considerably higher in quality than those typical of the northern forests.

2.—Tenure of Occupied Forest Lands, by Province, 1953

(Gross area in square miles)

Province	Private Forest Land			Crown Forest Land					Total Occupied Forest Land
	Farm Woodlots	Other Private Lands	Total	Pulpwood Licences	Saw Timber Licences	Timber Sales	Permit Berths	Total	
Newfoundland[1]	58	4,024	4,082	15,923	1,193	—	—	17,116	21,198
P. E. Island	541	67	608	—	—	—	—	—	608
Nova Scotia	2,884	5,581	8,465	700	—	44	—	744	9,209
New Brunswick	3,194	7,946	11,140	3,833	6,912	—	—	10,745	21,885
Quebec	9,179	10,858	20,037	71,812	8,857	—	—	80,669	100,706
Ontario	6,020	12,888	18,908	87,007	10,802	—	—	97,809	116,717
Manitoba	2,832	4,084	6,916	2,745	214	914	24	3,897	10,813
Saskatchewan	4,602	2,745	7,347	—	37	—	—	37	7,384
Alberta	4,477	4,561	9,038	—	2,500	150	50	2,700	11,738
British Columbia	1,807	8,573	10,380	756	2,846	3,020	617	7,239	17,619
Northwest Territories	—	—	—	—	—	—	4	4	4
Yukon Territory	—	—	—	—	—	—	16	16	16
Canada[1]	**35,594**	**61,327**	**96,921**	**182,776**	**33,361**	**4,128**	**711**	**220,976**	**317,897**

[1] Excludes Labrador.

3.—Forest Reserves and Parks, by Province, 1953

(Gross area)

Province or Territory	National Parks	Provincial Parks	Provincial Forest Reserves	Military Reserves	Indian Reserves	Federal Forest Experiment Stations	Total
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
Newfoundland	—	48	108	—	—	—	156
Prince Edward Island	7	—	—	—	4	—	11
Nova Scotia	390	—	—	23	30	—	443
New Brunswick	80	—	271	478	59	35	923
Quebec	[1]	20,244	6,056	22	281	7	26,610
Ontario	12	5,079	19,526	280	2,436	97	27,430
Manitoba	1,148	2,604[2]	4,603[2]	176	819	25[3]	7,682[2]
Saskatchewan	1,496	1,685	140,807	83	1,882	—	145,953
Alberta	20,718	117	8,619	5	2,370	47	31,876
British Columbia	1,671	14,087	35,505	407	1,283	—	52,953
Northwest Territories	3,625	—	—	—	—	—	3,625
Yukon Territory	—	—	—	41	9	—	50
Canada	**29,147**	**43,864**	**215,495**	**1,515**	**9,173**	**186**	**297,712[2]**

[1] Gatineau Park (70 sq. miles) and Quebec Battlefields Park (0·36 sq. mile) are under federal jurisdiction but are not considered National Parks and are excluded from the Quebec total figures. [2] Provincial Park development is carried out in two provincial forest reserves having a total area of 1,668 sq. miles; duplication is omitted from totals. [3] Included in the National Parks figure.

Section 4.—Forest Depletion

A general account of forest depletion and increment is presented in this Section. Details of the scientific control of those influences that account for wastage, viz., forest fires, insect pests, etc., are dealt with in Section 5, Forest Administration.

The average annual rate and cause of depletion of reserves of merchantable timber during the ten years 1942-51, together with preliminary data for 1952, are given in Table 4. Of the total depletion in the ten-year period, 81 p.c. was utilized and 19 p.c. was destroyed by fire, insects and disease. The utilization of 2,934,609,000 cu. feet comprised 39 p.c. logs and bolts, 32 p.c. pulpwood, 26 p.c. fuelwood, and the remaining 3 p.c. miscellaneous products. Approximately 6 p.c. of the logs and bolts and pulpwood were exported in unmanufactured form.

The more efficient utilization of timber that has been cut is one factor related to forest depletion. There is little doubt that in the past too high a percentage of the sawn log was discarded. Changes of great significance have been taking place in the uses of wood, permitting the utilization of sizes and qualities previously considered unmerchantable. The development of the manufacture of rayon, cellophane and numerous other products in the cellulose industry is rapidly extending the use of wood. The increasing demand for plastic-wood products, fibre board and laminated wood is resulting in greater use of inferior classes of wood, and therefore in the more complete utilization of forest resources and in the elimination of much waste.

4.—Average Annual Forest Depletion during the Ten-Year Period 1942-51 and 1952

Item	Usable Wood		Percentage of Depletion	
	Average 1942-51	1952^{p}	1942-51	1952^{p}
	M. cu. ft.	M. cu. ft.		
Products Utilized—				
Logs and Bolts—				
Domestic use	1,127,126	1,365,560	31·2	31·5
Exported	13,611	9,834	0·4	0·2
Pulpwood—				
Domestic use	777,568	986,776	21·5	22·8
Exported	162,128	211,927	4·5	4·9
Fuelwood	752,578	841,229	20·9	19·4
Other products	101,598	129,837	2·8	3·0
Average Annual Utilization	**2,934,609**	**3,545,163**	**81·3**	**81·8**
Wastage—				
By forest fires	175,453	289,656	4·9	6·7
By insects and disease	500,000	500,000	13·8	11·5
Average Annual Wastage	**675,453**	**789,656**	**18·7**	**18·2**
Average Annual Depletion	**3,610,062**	**4,334,819**	**100·0**	**100·0**

Although all the utilization and most of the wastage occurs on the currently *occupied productive* forest area of approximately 257,000 sq. miles (where commercial cutting is concentrated), it is from the *accessible productive* forest of 578,000 sq. miles that the forest production of the future will be obtained. Merchantable timber on the accessible productive forest is estimated at 275,268,000,000 cu. feet, of which approximately 125,000,000,000 cu. feet may be considered to be located on the occupied area. The average annual depletion for the decade 1942-51 amounted to 1·3 p.c. of the *accessible* productive volume or to 2·9 p.c. of the volume on the *occupied* portion. The depletion for 1952, however, shows an appreciable increase over the average, being 1·6 p.c. of the *accessible*, and 3·5 p.c. of the *occupied* portion. These rates are indicative of the fact that in many localities severe over-cutting is taking place, whereas the annual growth is not being used on the less accessible portions of the productive forest. This situation emphasizes the urgent need for increased protection and management of the commercial forests, if forest growth is to balance depletion and the forest industries are to maintain their dominant place in Canada's development.

Section 5.—Forest Administration

Subsection 1.—Administration of Federal and Provincial Timber-Lands*

The major portion of the forest resources of Canada are owned and administered by the provincial governments. The Federal Government is responsible for the administration of those of the Yukon and Northwest Territories and on other federal lands such as National Parks and Forest Experiment Stations. About 97,000 sq. miles are privately owned by individuals or corporations.

The general policy of the Federal Government and the provincial governments has been to dispose of the timber under their jurisdiction by means of licences to cut, rather than by the outright sale of timber-land. Under this system the Crown retains ownership of the land and control of the cutting operations. Revenue is received in the form of Crown dues or stumpage (either in lump sums or in payments made as the timber is cut); ground rents and fire-protection taxes are collected annually. All these charges against the timber and land may be adjusted at the discretion of the governments concerned.

The three Maritime Provinces did not adopt this policy to the same extent as did the rest of Canada. In Prince Edward Island practically all the forest land has been alienated and is in small holdings, chiefly farmers' woodlots. In Nova Scotia, 73 p.c. of the forest land is privately owned; holdings exceeding 1,000 acres make up more than one-half of this area. In New Brunswick, 50 p.c. is under private ownership. The percentages of privately owned forest land in the other provinces are as follows: Newfoundland, 16 p.c.; Quebec, 6 p.c.; Ontario, 8 p.c.; Manitoba, 7 p.c.; Saskatchewan, 7 p.c.; Alberta, 7 p.c.; and British Columbia, 4 p.c.

Provincial lands suitable for growing trees are set aside for timber production, and the policy of disposing of the title to lands fit only for the production of timber has been virtually abandoned in every province of Canada.

Over 2,000 professionally trained foresters are employed in Canada by the Federal Government, by provincial forest services, or by pulp and paper and lumber companies. The staff working for the Federal Government are almost entirely engaged in research; those employed by the provincial governments devote their attention mainly to the administration of provincial forest lands; while those in private industry, although they do some research, are concerned chiefly with forest management and protection.

Federal Administration.—The Canada Forestry Act provides, among other things, authority for the operation of forest experiment stations and forest products laboratories, some of which have been in existence for many years. The Act also authorizes the granting of federal assistance to the provinces to enable them to improve the management of their own forests.

Agreements with the provinces provide that the Federal Government pay one-half the cost to the provinces of completing and maintaining their forest inventories during a five-year period. They provide also for payments by the Federal Government to the province amounting to $10 per thousand trees planted and $1 per acre seeded by provinces on unoccupied Crown lands, provided that the share of this program paid for by the province itself is maintained at or above the average level of the previous three years. The Federal Government also agrees to pay one-fifth of the cost to the province for establishment and operation of new forest nurseries.

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* More detailed information is given in the 1954 Canada Year Book, pp. 458-465.

Between Dec. 4, 1951, and June 12, 1952, the Federal Government entered into agreements with all the provinces, except Quebec and Newfoundland, based generally on the above provisions. In the years ended Mar. 31, 1952 and 1953, federal payments to the provinces under the forestry agreements amounted to $802,405 and $1,023,706, respectively, after deduction of refunds made by the provinces with respect to interim claims. In 1953-54, actual payments totalled $1,170,189.

Inventory programs under the agreements were estimated to be two-thirds completed by the end of March 1954. The progress in forest inventories is given in Table **5**.

5.—Progress in Forest Inventories to Mar. 31, 1954

Project	Estimated Area to be Covered	Area Covered Prior to Agreements	Area Covered Under Agreements		
			Prior to Mar. 31, 1953	Year Ended Mar. 31, 1954	Total
	sq. miles	sq. miles	sq. miles	sq. miles	sq. miles
Ground control surveys	402,000	107,000	122,000	76,000	305,000
Air Photography—					
Small scale	686,000	246,000	158,000	173,000	577,000
Medium scale	449,000	201,000	113,000	65,000	379,000
Totals, Air Photography	1,135,000	447,000	271,000	238,000	956,000
Base Maps—					
Small scale	663,000	74,000	153,000	202,000	429,000
Large scale	339,000	199,000	40,000	19,000	258,000
Totals, Base Maps	1,002,000	273,000	193,000	221,000	687,000
Field surveys for forest data	935,000	167,000	249,000	118,000	534,000
Interpretation of photographs	1,021,000	163,000	242,000	207,000	612,000
Forest maps	1,021,000	85,000	184,000	163,000	432,000
Inventory reports	1,021,000	51,000	121,000	322,000	494,000

The total number of trees planted under the reforestation agreements up to Mar. 31, 1954, exceeded 30,000,000. In 1953-54, planting programs were carried out in five provinces to the extent of 9,386,000 trees. Details of over-all planting and seeding operations by provinces are shown in Table **6**.

6.—Reforestation under the Forestry Agreements to Mar. 31, 1954

Province	Trees Planted		Area Planted		Area Seeded	
	Year Ended Mar. 31, 1954	Total to Mar. 31, 1954	Year Ended Mar. 31, 1954	Total to Mar. 31, 1954	Year Ended Mar. 31, 1954	Total to Mar. 31, 1954
	No.	No.	acres	acres	acres	acres
Prince Edward Island	29,000	48,000	25	38	—	—
Nova Scotia	36,000	59,000	35	59	—	—
Ontario	8,533,000	22,668,000	8,533	22,667	—	6,000
Manitoba	670,000	1,292,000	587	1,093	—	—
Saskatchewan	118,000	567,000	81	425	188	357
British Columbia	—	5,745,000	—	6,090	—	—
Totals	**9,386,000**	**30,379,000**	**9,261**	**30,372**	**188**	**6,357**

The Federal Government has also agreed to pay to the Province of New Brunswick, during a three-year period ending Mar. 31, 1956, one-third of the cost up to a maximum of $3,000,000 of an aerial spraying operation against the spruce budworm in the northern part of the Province. The Government of New Brunswick is also contributing one-third of the cost, the remaining third being contributed by the forest industries in the area affected. In the early summer of 1953, more than 1,000,000 gallons of DDT insecticide were sprayed over an area of about 2,800 sq. miles. The Federal Government contributed $1,000,000 to the cost of the budworm spraying operation in 1953-54. Subsequent studies by forest entomologists of the Federal Department of Agriculture showed that the average mortality of budworm larvæ from spraying ranged from 87 to 99 p.c. Damage to foliage was light enough so that only a small part of the area needs to be resprayed to save it from further damage by the budworm.

Recent Advances in Forest Management Programs.—During recent years an increasing interest has been shown by governments and industry alike in programs to stimulate production of forest products and, at the same time, perpetuate Canada's forest resources. Most of the provinces require timber operators on Crown lands to submit forest inventories of their cutting areas and to prepare management plans covering operations for a stated period of time.

Saskatchewan has taken an effective step towards conservation of its forest resources by curtailing the annual cut to an amount approximating 5 p.c. of the estimated stand of merchantable spruce saw-timber in each particular district.

In British Columbia the granting of forest-management licences under authority of an amendment in 1947 to the British Columbia Forest Act will, undoubtedly, lead to a great improvement in forestry practice in that Province. Continuity of tenure, which is essential to the successful operation of a sustained-yield program, is assured by these licences under which the Minister of Lands and Forests of British Columbia may enter into long-term timber agreements with operators. At the end of 1953 a total of 14 Management Licence contracts were in effect, with an allowable annual cut on a sustained-yield basis of 70,800,000 cu. feet; and there were 25 Public Working Circles over the whole province, with an annual allowable cut of 133,700,000 cu. feet; making a total on sustained-yield equal to more than 25 p.c. of the total forest production of the Province. In 1948 a further amendment to the British Columbia Forest Act established a Forest Development Fund of $2,500,000 for the building of forest roads and bridges intended for the economical harvesting of forest products.

The Provinces of Nova Scotia, New Brunswick and Ontario have each appointed an Advisory Committee composed of representatives of the provincial government, the forest industries and other organizations interested in the welfare of the forests, so that forest problems can be discussed and a concerted effort made to solve them for the benefit of all. Efforts are being made, especially in Quebec and Ontario, to encourage the establishment and maintenance of forests on a community basis.

The use of air photographs for forestry purposes is a comparatively new field in which progress has been made in both research and practice (*see* p. 454). By the use of such photographs the Forestry Branch of the Department of Northern Affairs and National Resources has been continuing its work on the aerial forest mapping of federally administered lands and other territories. Forest inventory maps, for example, were prepared from air photographs of the Eastern Rockies Forest Conservation Area and data were collected on the ground to support the interpretation of the photographs. The development of instrumental aids in forest photography and in interpretation is being continued.

Timber Control.—The formal control of timber by the Timber Controller, as established during the war years, ceased on Mar. 31, 1950. Since that date the only controls have been those exercised through licences for the export of logs and pulpwood, required under the authority of the Export and Import Permits Act.

Subsection 2.—Forest Fire Protection

The Federal Government is responsible for fire protection in the forests under its administration—chiefly those of the Yukon and Northwest Territories, the National Parks, Indian lands and Forest Experiment Stations. Each of the provincial governments, except that of Prince Edward Island, maintains a fire-protection organization co-operating with owners and licensees for the protection of timbered areas, the cost being distributed or covered by special taxes on timber-lands.

In each province, except Prince Edward Island, provincial legislation regulates the use of fire for clearing and other legitimate purposes and provides for the closing of forests to travel or work during dangerous periods. The Province of Quebec has organized a number of co-operative protective associations among lessees of timber limits. These associations have their own staffs, which co-operate with those of the Board of Transport Commissioners and the Provincial Government. The latter contributes towards fire-suppression costs and also pays for the protection of vacant Crown lands lying within the area of the associations' activities. In the Province of Newfoundland, responsibility for the protection of most licensed timber-lands is vested in the lessees; the Newfoundland Forest Protection Association, maintained jointly by government and industry, carries out certain important fire-control functions.

The provincial services of forest fire protection along railway lines are assisted by the Railway Act, administered by the Board of Transport Commissioners. The Board has wide powers relating to fire protection along railway lines under its jurisdiction. Certain officers of the various forest authorities are appointed ex officio officers of the Board of Transport Commissioners and co-operate with the fire-ranger staffs which the railway companies are required to employ under the Railway Act.

In many districts in Canada, radio-equipped aircraft are used to good effect for the detection and suppression of forest fires. Where lakes are numerous, seaplanes or flying boats can be used for fire detection and for transportation of fire-fighters and their equipment to fires in remote areas especially. In Ontario, water bombing of small fires is regularly practised and in some districts helicopters are being used in fire suppression work. Equipment and supplies are sometimes dropped by parachute to isolated fire crews and, in Saskatchewan, parachutists are employed to fight fires that are difficult to reach.

Fire detection in more settled areas is carried out from lookout towers fitted with telephone or radio for reporting, and fire-fighting crews and equipment are maintained at strategic points. These crews, when not engaged on fire-suppression duties, are employed on the construction and maintenance of roads, trails, telephone lines, fire guards and other improvements.

Portable gasoline pumps and linen fire hose are important items of equipment and may be carried by canoe, motor-boat, automobile, aircraft, pack-saddle or back-pack. The pumps provide hose pressures of up to 200 lb. per sq. inch, depending upon the elevation above and distance from the water supply; hose lines of over a mile in length are frequently used. Small hand-pumps supplied by 5-gallon portable containers are also effective. Bulldozers and ploughs are commonly used for fire-line construction and trucks fitted with water tanks and power pumps are employed for the control of fires adjacent to roads. Despite the provision of these mechanical aids, more than half of all fires are fought with hand tools.

The various government forest authorities conduct forest conservation publicity work independently and in co-operation with the Canadian Forestry Association. Since its beginning in 1900, the CFA has played an important part in securing popular co-operation in reducing the fire hazard. By means of its magazine, which has a large circulation, by railway lecture cars and motor-trucks provided with motion-picture equipment, and by co-operation with radio broadcasting stations and the press, the Association reaches a large proportion of the population of Canada. Efforts are made through the schools, by specially appointed junior forest wardens and other means, to educate the younger generation on the value of the forests and on the seriousness of the devastation caused by fire and the means of preventing such devastation.

Forest Fire Statistics.—During 1952 there were 5,101 forest fires compared with 4,529 in 1951 and an average for the period 1942-51 of 5,121. However, the average size of forest fires in 1952 and in 1951 was smaller than the average for the ten-year period, the area burned in the two later years being 991,196 acres and 896,426 acres, respectively, and the ten-year average being 1,622,364 acres. The estimated values destroyed in 1952 were 20 p.c. less than in 1951 and 5 p.c. less than the average; the actual cost of fire fighting was 39 p.c. less than in 1951 and 37 p.c. more than the average.

Although April and May were unusually dry months for Newfoundland and April was dry in Nova Scotia and fire occurrence was then highest above normal, the greatest fire damage occurred in these Provinces in July. In New Brunswick and Quebec over 80 p.c. of the damage occurred in the July-August period and no serious fire situation developed during the exceptionally dry autumn. Weather conditions in Ontario were generally favourable for fire protection and the acreage burned in that Province was less than one-tenth of the annual average for 1942-51; most of the fires occurred in April and May. Manitoba's one hazardous period was in April, but Saskatchewan had a very lengthy dangerous season. Most fires in Saskatchewan occurred in April and May but some were reported in November and December. The northeastern districts of Alberta suffered a severe drought during April and May when almost all of the Province's fire damage occurred. In British Columbia hazard conditions were not extensive but periods of high danger developed west of the Rockies in May and over the whole province in July and August. The fire period in the Northwest Territories extended from April to early August but cool damp weather in Yukon Territory precluded danger of fire there.

7.—Summary Statistics of Forest-Fire Losses, 1952, compared with Ten-Year Average, 1942-51

Item		Provinces[1]		Yukon and Northwest Territories, 1952
		Annual Average 1942-51[2]	1952	
Fires under 10 acres	No.	3,752	4,031	23
Fires 10 acres or over	"	1,369	1,070	37
Totals, Fires	**No.**	**5,121**	**5,101**	**60**
Area Burned—				
Merchantable timber	acres	300,815	185,530	5,308
Young growth	"	383,889	251,081	1,657
Cut-over lands	"	204,999	138,087	65
Non-forested lands	"	732,661	416,498	161,725
Totals, Area Burned	**acres**	**1,622,364**	**991,196**	**168,755**
Average size of fire	acres	317	194	2,813
Merchantable Timber Burned—				
Saw-timber	M ft. b.m.	361,763	1,055,120	36
Small material	cords	1,080,217	975,626	31,360
Estimated Values Destroyed—[3]				
Merchantable timber	$	1,552,705	1,256,395	16,363
Young growth	$	966,147	975,796	2,157
Cut-over lands	$	181,179	107,809	62
Other property burned	$	979,636	1,152,861	8,200
Totals, Damage	**$**	**3,679,667**	**3,492,861**	**26,782**
Actual costs of fire fighting	$	1,622,754	2,222,010	45,596
Totals, Damage and Fire-Fighting Costs	**$**	**5,302,421**	**5,714,871**	**72,378**
Area under protection	sq. miles	...	1,065,000	130,000

[1] Includes federal lands within provincial boundaries. [2] Excludes Newfoundland. [3] Wood values are based on prevailing stumpage rates only; damage to soil, site quality, streamflow regulation, wildlife, recreational and similar values, is not included.

8.—Forest-Fire Losses, by Province, 1952 compared with Ten-Year Average, 1942-51

Province and Item	Annual Average 1942-51	1952	Item	Annual Average 1942-51	1952
Newfoundland—			**Quebec—**		
Forest fires ... No.	..	205	Forest fires ... No.	1,126	604
Area burned ... acres	..	30,739	Area burned ... acres	170,523	55,857
Fire-fighting cost and damage ... $	..	183,919	Fire-fighting cost and damage ... $	849,167	1,085,509
Nova Scotia—			**Ontario—**		
Forest fires ... No.	267	237	Forest fires ... No.	1,284	1,095
Area burned ... acres	16,018	3,615	Area burned ... acres	176,022	12,421
Fire-fighting cost and damage ... $	142,813	48,517	Fire-fighting cost and damage ... $	1,143,446	332,173
New Brunswick—			**Manitoba—**		
Forest fires ... No.	246	247	Forest fires ... No.	248	378
Area burned ... acres	35,821	4,252	Area burned ... acres	185,014	173,770
Fire-fighting cost and damage ... $	371,606	103,128	Fire-fighting cost and damage ... $	245,998	291,269

8.—Forest-Fire Losses, by Province, 1952 compared with Ten-Year Average, 1942-51—concluded

Province and Item	Annual Average 1942-51	1952	Item	Annual Average 1942-51	1952
Saskatchewan—			Northwest Territories—		
Forest fires............ No.	129	137	Forest fires.......... No.	..	37
Area burned...........acres	185,263	38,073	Area burned.........acres	..	137,124
Fire-fighting cost and damage.............. $	135,257	79,106	Fire-fighting cost and damage............ $	..	44,177
Alberta—			National Parks—		
Forest fires............ No.	232	193	Forest fires.......... No.	32	34
Area burned...........acres	457,321	484,338	Area burned.........acres	11,838	19,784
Fire-fighting cost and damage.............. $	1,081,034	1,348,910	Fire-fighting cost and damage............ $	15,323	16,841
British Columbia—			Indian Lands—		
Forest fires............ No.	1,508	1,914	Forest fires.......... No.	45	55
Area burned...........acres	364,569	152,406	Area burned.........acres	19,873	15,938
Fire-fighting cost and damage.............. $	1,297,612	2,053,677	Fire-fighting cost and damage............ $	19,926	171,819
Federal Lands—			Forest Experiment Stations—		
Yukon Territory—					
Forest fires.......... No.	..	23	Forest fires.......... No.	4	2
Area burned.........acres	..	31,631	Area burned.........acres	102	3
Fire-fighting cost and damage............ $	..	28,201	Fire-fighting cost and damage............ $	239	3

9.—Forest Fires, by Cause, 1952 compared with Ten-Year Average, 1942-51

Cause	Provinces[1]				Yukon and Northwest Territories, 1952	
	Annual Average 1942-51[2]		1952			
	No.	p.c.	No.	p.c.	No.	p.c.
Camp-fires..............................	820	16	836	16	25	42
Smokers..............................	1,112	22	1,083	21	5	8
Settlers..............................	571	11	518	10	—	—
Railways..............................	583	11	684	13	—	—
Lightning..............................	886	17	744	15	8	13
Industrial operations....................	222	4	309	6	1	2
Incendiary..............................	142	3	153	3	1	2
Public works..............................	69	2	86	2	—	—
Miscellaneous known....................	442	9	495	10	—	—
Unknown..............................	274	5	193	4	20	33
Totals.....................	**5,121**	**100**	**5,101**	**100**	**60**	**100**

[1] Includes federal lands within provincial boundaries. [2] Excludes Newfoundland.

Subsection 3.—Research in Forestry

The chief responsibility of the Federal Government in the field of forestry is to carry out research in problems affecting Canada's forests and their development, conservation and more effective utilization. To this end, forest research and forest products research facilities have been greatly expanded throughout Canada during the past five years. The Federal Government, several provincial governments, the Pulp and Paper Research Institute of Canada, the four universities with faculties of forestry, and a number of the larger industrial companies conduct research in these fields. The Forestry Branch of the Federal Department of Northern Affairs and National Resources conducts research in forest economics, silviculture, management, forest inventory methods, forest fire protection, and in forest products. An extensive program of research is under way on the experiment stations and on other lands, where an increasing proportion of the total effort is being expended in co-operation with provincial authorities and industry.

Forest Research.—Research in silviculture and management has been concentrated since World War II upon problems of regeneration, growth and stand development, and harvest cutting methods. A regeneration survey extending from the Rocky Mountains to the Atlantic Coast has provided information on the status of regeneration on cut-over and burned lands. This has been followed by intensive work of a more fundamental nature to assess the factors responsible for the success or failure of regeneration and, by empirical tests of practical cutting methods, seed-bed treatments, and seeding and planting methods, to obtain reproduction. Studies are made of the growth, yield and successional changes in the most important forest types. Systems of classifying forest sites so as to assess their effective growth, development and long-term productivity are being devised. Research in tree breeding is also carried on for artificial propagation by selection and development of superior strains. Research in forest management is concerned with the application of silviculture, regulation of cut, and protection so as to maintain forests at their highest production levels. Many of the research studies in silviculture and forest management are conducted co-operatively with provincial forest services and wood-using industries.

Forest fire protection in Canada is a vital problem and is therefore a major concern of federal and provincial forest authorities. Forest fire protection of Crown lands is the responsibility of provincial forest services but federally owned forest lands, such as the National Parks, the Forest Experiment Stations, and lands in the Yukon and Northwest Territories, are the responsibility of the Federal Government. Other organizations responsible for forest fire protection within their respective territories are the forest protective associations in Quebec and company organizations dealing with privately owned forest land in Nova Scotia and British Columbia. In forest fire research, the Federal Forestry Branch is working towards full co-operation with the provincial forest services in achieving the best methods of forest fire protection. The leading contributions of the Branch have been in the field of fire-hazard research and in the development of equipment and techniques for fire fighting. Increasing attention is being given to research relating to such fields as fire-control planning, visible area mapping, detection and communications equipment, and the development of fuel-type classification methods and mapping techniques. A number of provincial forest-protection services are also engaged in research activities. Notable advances have been made in several provinces in the development of forest communications equipment, the dropping of supplies to fire fighters by parachute, and the design of mechanical fire-fighting equipment.

Research in forest inventory methods is of increasing importance because of the greatly expanded inventory programs being conducted in most provinces. Data from air photographs are correlated with field work to develop new techniques of timber estimating, which is being facilitated by the use of stand-volume tables. Various methods of field sampling are being investigated and compared. Research is being continued in methods for measuring tree images and tree shadows to determine heights, crown widths, canopy density and other data from photographs taken in different seasons of the year under various conditions. The use of large-scale photography of sample areas is also being investigated and studies are being made in the identification of species and sub-types. Construction of suitable photogrammetric and other scientific apparatus includes those required by the forestry tri-camera method of air photography, which has been developed to provide maximum forestry information at minimum cost, and the shadow-height calculator, constructed to facilitate the determination of tree heights from shadows in air photographs.

Research in forest economics is concentrated on problems associated with the production of wood in the forest. These problems are concerned with land use, land tenure, taxation, forest legislation and administrative techniques, forest management, forest labour and the valuation of forest lands. Economics research also involves continued study of the broad developments in forest industries.

Forest Biology.—The Division of Forest Biology of the Science Service, Federal Department of Agriculture, undertakes investigations dealing with the biology and control of insects and diseases affecting forest and shade trees. The Zoology Unit maintains ten regional laboratories at strategic points across the country. The Forest Pathology Unit operates six branch laboratories. An insect disease laboratory was recently established at Sault Ste. Marie, Ont., for fundamental research on virus, fungi, and bacterial diseases of insects.

A special article dealing with Noxious Forest Insects and Their Control appears in the 1947 Year Book, pp. 389-400. A detailed account of the activities in forest pathology in Canada may be found in the 1948-49 Year Book, pp. 416-417.

Forest Products Research.—The following special article outlines the history of the forest products laboratories and deals in detail with their current activities.

THE FOREST PRODUCTS LABORATORIES OF CANADA*

The Laboratories.—In 1913, in co-operation with McGill University, the Forest Products Laboratories of Canada were established and located on the campus of the University at Montreal, Que. By that time, the widespread and diversified nature of Canada's forest industries, their significance to the national economy and the vital importance of export markets had clearly indicated that, in the main, forest products research should be a national rather than a provincial function.

A second laboratory was established in 1917 on the campus of the University of British Columbia at Vancouver, B.C., for the primary purpose of conducting aircraft research entailing the testing and use of considerable quantities of high-grade Sitka spurce, available only on the West Coast.

By 1927, the expansion of research facilities, an increasing staff of research personnel and the coincident addition of test and laboratory equipment had made it necessary to find larger quarters for the Montreal Laboratory and, with the exception of the Pulp and Paper Unit,† the Forest Products Laboratory was moved to its present quarters at Ottawa.

Both Laboratories are now staffed and equipped for work in all the principal phases of research pertinent to wood and its uses, including certain aspects of the wood chemistry field not related to the manufacture of paper. The activities of the two Laboratories are generally similar although the work at Vancouver is weighted in favour of British Columbia species. Research activities are so integrated that findings are valid wherever they are applicable in Canada or elsewhere. However, development has not reached its zenith. Scientific and mechanical equipment is being constantly improved and every endeavour is made to recruit and maintain a professional and technical staff capable of rendering efficient service in the varied and extensive pattern which must be followed in forest products research.

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* Prepared by J. H. Jenkins, Chief of the Forest Products Laboratories of Canada, a Division of the Forestry Branch, Department of Northern Affairs and National Resources.

† Pulp and paper research is carried out by the Pulp and Paper Research Institute of Canada, at Montreal. This Institute is a non-profit corporation to which the Canadian Government makes an annual grant. Its management is vested in a Board of Directors composed of representatives of the Canadian Pulp and Paper Association, McGill University and the Canadian Government.

The work of the Laboratories is organized to provide a continuing program of fundamental research which will constantly add to the growing volume of basic data on record. A large number of investigations and studies in the fields of applied research are also undertaken to determine the results of the numerous factors affecting conversion and utilization. Research work also extends to the field of utilization; basic and exploratory investigations are directed towards determining methods, processes and new uses which would result in a more complete and effective utilization of the original wood substance available from the tree.

There is, as well, a fairly substantial volume of work performed for the Canadian Armed Services and other government departments and in the carrying out of tests and investigations requested by industry. Industrial interest in forest products research is constantly growing and this awareness of the value and importance of research findings is reflected by the large increase in enquiries received by the Forest Products Laboratories.

A carefully selected library provides background information and knowledge of the work in other forest research organizations as well as essential reference material. Regular contact is maintained with forest products research organizations throughout the world and the continuing exchange of information is considered of major importance. As research data are published in many languages it is often necessary to translate original material, a field in which much duplication of effort existed in the past. As a result of an arrangement made at the Forest Products Pre-Conference of the British Commonwealth Forestry Conference held at Ottawa in 1952, translations are now supplied to other countries and information is exchanged as to translations in progress.

Each year a Program of Work is circulated so that research workers in other fields will be aware of the particular projects under study at both the Ottawa and Vancouver Laboratories. Most of the research work is national in scope but certain projects are carried out primarily to meet the requirements of areas with problems of a unique nature.

More generally stated, the Forest Products Laboratories of Canada aim their activities so as to provide a desirable balance between the essential work of fundamental studies—to provide basic data—and investigations in the domain of applied research. In this manner it is believed that the forest products industries are best served, and that long-term and continuing benefits to the national economy will be of highest value.

The results achieved in the past forty years have provided an impressive fund of knowledge on the properties and uses of Canadian wood species. These accumulated data serve to assess problems arising out of utilization and are of high value in planning additional research.

There is recognition that the value of research lies mainly in the application of its findings in the practical fields of commercial production. The administration, therefore, endeavours to maintain a close liaison with forest products industries so that, aware of their needs, it can co-operate in finding solutions to production problems as well as assess and evaluate new methods, processes, and equipment.

It is realized that, in a competitive economy, efficiency plays a dominant role and considerable work has been undertaken to provide dependable data on various phases and factors pertinent to conversion and utilization. Among such studies are those related to sawmilling, veneer cutting and plywood production, the use of radio-frequency heating, and the recovery of sawmill and logging residue.

In the fields of chemical utilization, wood structure, wood preservation and pathology, and timber mechanics and engineering, specialists and technicians—with suitable laboratory equipment and following recognized research techniques—are actively engaged in recording and interpreting research findings, and thus they expand knowledge applicable to forest products research.

Results of the Laboratory investigations are analysed and appraised and supply the subject matter of many reports and publications so that findings may be available and research knowledge disseminated where it can best serve. A large number of publications, available on request, have been issued on various phases of forest products research.

The Laboratories are represented on many technical committees including: the Fundamental Research, the Testing and Control, and the Camp Heating Committees of the Canadian Pulp and Paper Association; the Paint, Furniture, Packaging, Paper Products and Building Board Technical Sub-committees of the Canadian Government Specification Board; Structural Timber, Laminated Construction, Plywood, Millwork and Packaging Committees of the Canadian Standards Association; the Materials and Design Committees of the National Building Code; the Research co-ordinating Committee on the Utilization of Mill Waste for Pulpwood; the Wood Committee, American Society for Testing Materials; the Preservatives Committee, American Wood Preservers Association; and the Preservation Committee, B.C. Plywood Manufacturers' Association.

Organization of Research.—The plan followed at both Laboratories is to group related research within separate Sections composed of several Units. Each Unit is responsible for a particular phase of research work and is in charge of a specialist in that field. Training of and specialization by the technical personnel rounds out Unit organization and ensure a high degree of accuracy in research investigations. A Section Head, with technical qualifications and administrative ability, is in immediate charge of the work of a Section, under the control of the Laboratory Superintendent. A brief description of the work of the five Sections follows:—

TIMBER MECHANICS

Timber Engineering: Determination of the mechanical and physical properties of Canadian woods; timber fabrication; new forms of wood construction, including laminations and arches; timber fasteners; technical data for use in timber standards and building codes.

Plywood: Problems incident to the production of veneers and the manufacture of plywood, including testing and studies of improved manufacturing techniques, properties of adhesives, bonding techniques and durability of bonds;

basic studies on the use of high-frequency heating and its uses, including investigations on its application to bonding in gluing operations and the production of curved plywood shapes.

Containers: Generally, the design and testing of containers and the assessment of their suitability for carrying intended loads; the study of handling and transit hazards; supplying of technical data for container codes and studies aimed at improving container design.

Wood Preservation and Pathology

Preservation: Treatment of wood with preservatives by pressure and non-pressure methods; ground-line treatments; service tests; chemical analyses of treated timber; determination of the efficacy of new preservatives; treatment of timber against attacks by insects and marine organisms; durability tests on treated wood by laboratory techniques and in service installations.

Pathology: The study of wood-destroying and wood-staining fungi, including their identification and their effect on the serviceability of timber, and methods of control; identification and life history of fungi, stain, and moulds; durability tests of untreated wood by wood-soil and other accelerated laboratory techniques.

Wood Paints and Coatings: Investigations on the use and composition of paints and other forms of surface coatings applied to wood; durability of exterior coatings on wood; effect of various factors, such as timber species, moisture content of wood, and resin content on surface coatings; fire-retardant paints and coatings.

Wood Utilization

Logging and Milling: Studies pertinent to the production of lumber and other primary manufacturing products; investigation of production methods and equipment with a view to more complete utilization; research into possible conversion to economic use of material now discarded; investigation of the benefits from closer integration of wood-using industries; operation of a research sawmill. Of necessity, these studies are undertaken in logging operations and at the sawmills and factories of co-operating industrial companies which have been selected as being representative of the manufacturing region or forest area being investigated.

Secondary Wood-using Industries: Research into the secondary wood-using industries, aimed at developing more effective utilization and reducing incident waste; investigations initiated with a view to determining new outlets for Canadian woods, and particularly for hardwoods; studies of forest products economics.

Lumber Seasoning: Investigations into the theory and techniques of lumber seasoning, including air-drying, kiln-drying, and other methods; research and experimentation to secure data for the preparation of kiln-drying schedules; studies pertinent to seasoning practices in industry aimed at developing improved methods of drying; organized kiln-drying and lumber seasoning courses of instruction.

Wood Chemistry

Chemical Utilization and Organic Chemistry: Investigations and experimental production of fibreboard, wallboard, and binder board from wood waste; studies aimed at the production of improved wood; research into the production of tannins from the bark of Canadian wood species; studies on the chemical composition of wood and on the chemistry of wood, carbohydrates, lignin, and bark; research and experimentation into the production and properties of cellulose from sawdust; investigations of the extractives from wood.

Microbiology: Investigations and experimentation into the possibilities of utilizing wood waste by microbiological means, including research with wood digesting organisms and the microbiological decomposition of wood.

WOOD STRUCTURE

Structure and Uses: Research into wood structure and its effect on the properties and behaviour of wood in service; investigations into the microstructure of Canadian timber species and the effects and causes of irregularities in wood structure; studies on the reaction of wood structure to the penetration of chemicals, and on the use of chemicals to improve dimensional stability.

Anatomy-Growth Relationship: Co-operative studies with the Forest Research Division aimed at determining the effects of various natural growth conditions and of silvicultural practices on wood quality.

Wood Identification: Work related to the identification of wood and maintenance of a reference collection of woods of the world and the recording of data pertinent to wood identification.

Past Research.—Since their formation, the Forest Products Laboratories have followed a plan intended continually to expand the record of basic data on the properties and uses of Canadian timber species. Close contact with the work of other forest products research organizations throughout the world has provided additional and valuable information.

An extensive program of timber-testing has resulted in the accumulation of data on the mechanical properties of all Canadian commercial timber species. These tests were carried out on carefully selected clear specimens and on timbers of structural sizes. From these data, basic and working stresses have been computed and strength tables prepared for use in designs.

There have been two distinct approaches to research into the durability of various Canadian woods. Pathological studies have determined the types, conditions of occurrence and the deterioration caused by different fungi. These studies have extended to logs, pulpwood and other material in the round, through phases of their conversion and use. Results obtained have been interpreted and serve as a basis for preventive measures to eliminate or greatly reduce fungi infection. The second phase has dealt with the treatment of wood with preservatives to determine their suitability for use for various treating methods and to record the increased service life obtained. Data on increased durability obtained through the use of preservatives are now on record for many Canadian timber species.

The design and service value of containers have been investigated and records of resistance to handling and transit hazards are now available for containers of many types. Studies included re-design of containers in use and new designs for specific loads, as well as careful review of construction to determine the most efficient production of acceptable packaging.

The air-seasoning and kiln-drying of lumber have received intensive study and experimentation, and drying schedules and piling methods have been developed. These investigations have resulted in the accumulation of data pertinent to the seasoning of Canadian species of board and structural sizes, and the drying of specialized stock. Kiln-drying and seasoning courses are held each year at Vancouver and Ottawa.

Progress in research is frequently largely dependent on the recording of data secured from actual operations. Field studies have been made at a number of sawmills, on logged areas, and in industrial plants in order to provide factual records of production with a view to determining the factors responsible for efficient operation. Planning and selection of representative sites for these studies permit application of results on a broad basis.

Recently a Research Sawmill of the circular headrig type has been installed at the Ottawa Laboratory. It is instrumented to provide for the control, study and recording of the many variables that affect lumber recovery and quality and is providing fundamental data on conversion processes.

Recognition of the considerable waste of valuable wood substance through residue occurring in log conversion and other manufacturing processes has resulted in many studies directed to reducing such waste to a minimum and to finding economic uses for the various types of residue. Investigations in the field of waste utilization have included reprocessing and chemical conversion and, recently, research in possible new production through microbiological means. A considerable volume of data has been placed on record relative to the chemical composition and chemical processes for the utilization of wood substance. In this field, production of tannins, determination of extractives, recovery of lignin from waste pulp liquors, and hydrolysis have been the principal avenues of research.

The various processes of veneer and plywood production have received much attention and the available records contain extensive data of a fundamental and applied nature. A commercial-size rotary veneer lathe, with necessary ancillary equipment, and instrumented for research, has been in operation at the Ottawa Laboratory. Investigations include the determination of the suitability of Canadian woods, not now used, for cutting to veneers and for the production of plywood, as well as the efficiency and suitability of various glues and bonding processes.

The use of radio-frequency power in the wood-using industry, and particularly in wood-bonding operations has been intensively studied. Fundamental data have been obtained and practical applications, including the production of curved plywood shapes and building panels, have been developed. Data on the dielectric properties of Canadian wood species have been recorded.

Thus, past research of the Forest Products Laboratories has been so oriented as to procure basic and applied data on the complex factors involved in all conversion processes, and to determine those conditions which produce the most satisfactory results from wood in service.

Future Research.—Fundamental research into the mechanical, physical and chemical properties of Canadian wood species will continue in order to expand and complement data now on record and to keep under continual review the basic factors that affect utilization and satisfactory service.

To keep abreast of or, whenever possible, ahead of industrial trends, investigations will be undertaken to assess or develop new techniques and new approaches to conversion and utilization practices. Field and laboratory studies will continue to be directed to the more economical use of available wood substance and to means of reducing to a minimum incidental waste or residue. Research will be extended to Canadian wood species not now considered as commercial timbers, and to determining the suitability for additional uses of timbers now in commercial production. Special attention will be given to problems related to the handling, transportation and chipping of slabs and edgings for the manufacture of pulp.

Intensive research into logging will continue to explore possibilities for higher extraction and limitation of waste. The Research Sawmill studies will comprise determination of the variables affecting production as well as the development of machinery and methods for reducing manufacturing costs.

Studies of the chemistry of Canadian woods, chemical utilization, wood laminations, veneers and plywoods, dielectric heating, preservation, and wood rots will form the subject matter of numerous research projects.

Research findings will continue to be reported in Forest Products Laboratories of Canada publications, prepared to contain the maximum of useful information. The Laboratories also will continue to provide, on request, specific data in response to industrial inquiries. This sometimes necessitates additional investigation to supplement the data on record.

In a developing economy, increasingly dependent on research findings for expansion and orientation, it is difficult accurately to forecast research requirements. However, the original and continuing policy of the Forest Products Laboratories of Canada is to carry on research work of a fundamental nature and at the same time to adapt investigations and studies so that they can best meet the needs of industry.

Section 6.—Forest and Allied Industries

This Section is concerned with the many industries employed in the hewing down of timber in the forest and its transformation into the numerous utilitarian shapes and forms required in modern living. The basic industries provide the raw material for sawmills, pulp and paper mills and for the wide range of secondary industries that convert the products of the basic industries into more highly manufactured goods such as veneers and plywoods, sash and doors, furniture and all the vast range of industries that use wood in any form in their processes. These industries, especially the pulp and paper industry and the lumber industry, contribute substantially to the value of Canada's export trade and thereby provide the exchange necessary to pay for a large share of the imports purchased from other countries, particularly the United States.

Subsection 1.—Woods Operations

In connection with operations in the woods, it should be borne in mind that the forests not only provide the raw materials for the sawmills, pulp mills, wood distillation, charcoal, excelsior and other plants, but also provide logs, pulpwood and bolts for export in the unmanufactured state, and fuel, poles, railway ties, posts and fence rails, mining timber, piling and other primary products which are finished in the woods ready for use or exportation. A number of minor forest products help swell the total, such as Christmas trees, maple sugar and syrup, balsam gum, resin, cascara, moss and tanbark.

It has been estimated that operations in the woods during the logging season in 1952 gave employment amounting to 44,795,000 man days and distributed $158,000,000 in wages and salaries.

10.—Value of Woods Operations, by Product, 1947-52

Product	1947	1948	1949	1950	1951	1952
	$	$	$	$	$	$
Logs and bolts	205,259,855	215,108,932	207,789,335	253,649,547	316,027,115	304,262,790
Pulpwood	237,488,741	284,656,819	270,697,980	285,762,620	381,920,846	396,102,104
Fuelwood	46,206,336	49,535,855	48,816,965	49,804,328	50,521,011	61,355,643
Hewn railway ties	1,177,806	1,303,596	917,033	495,509	612,583	1,292,636
Poles	8,404,809	13,116,480	11,485,488	19,209,308	13,249,988	16,961,456
Round mining timber	10,082,458	10,268,435	10,376,305	3,767,076	6,420,818	19,917,669
Fence posts	2,832,783	2,489,286	2,640,576	2,906,249	2,920,922	3,432,675
Wood for distillation	544,746	497,286	467,997	425,918	466,491	441,443
Fence rails	628,804	591,484	644,844	705,106	671,491	758,519
Miscellaneous products	7,177,790	8,726,895	7,575,539	9,008,942	9,713,750	11,126,259
Totals	**519,804,128**	**586,295,068**	**561,412,062**	**625,734,603**	**782,525,015**	**815,651,194**

11.—Production and Consumption of Wood Cut in Woods Operations, 1943-52, by Product, 1951 and 1952

NOTE.—Details by chief products and by provinces for the years 1926-51 will be found in the DBS Bulletin, *Annual Estimate of Operations in the Woods, 1951*, and earlier issues.

Year and Product	Production			Consumption		
	Quantity Reported or Estimated	Equivalent Volume of Merchantable Wood[1]	Total Value	Quantity Reported or Estimated	Equivalent Volume of Merchantable Wood[1]	Total Value
		M cu. ft.	$		M cu. ft.	$
1943	...	2,475,906	268,615,283	...	2,312,200	243,737,886
1944	...	2,508,046	301,570,823	...	2,332,157	270,730,868
1945	...	2,566,058	334,324,901	...	2,375,780	298,992,227
1946	...	2,812,718	413,269,314	...	2,585,060	365,537,917
1947	...	3,091,086	519,804,128	...	2,854,481	466,722,041
1948	...	3,198,179	586,295,068	...	2,937,614	523,668,509
1949	...	3,140,137	561,412,062	...	2,954,454	515,324,829
1950	...	3,342,399	625,734,603	...	3,168,238	580,885,734
1951						
Logs and bolts...M ft. b.m.	7,388,461	1,409,071	316,027,115	7,441,124	1,419,080	316,753,316
Pulpwood............ cord	15,053,910	1,279,582	381,920,846	12,229,371	1,039,496	316,600,016
Fuelwood............ "	10,217,175	817,374	50,521,011	10,203,773	816,302	50,316,468
Hewn railway ties.... No.	387,370	1,937	612,583	387,370	1,937	612,583
Poles and piling....... "	904,007	13,560	13,249,988	717,288	10,759	10,430,692
Round mining timber.cu. ft.	19,320,147	19,320	6,420,818	11,147,012	11,147	3,854,682
Fence posts........... No.	15,502,849	18,603	2,920,922	14,268,661	17,122	2,617,908
Wood for distillation.. cord	53,665	4,293	466,491	53,665	4,293	466,491
Fence rails........... No.	4,675,020	4,675	671,491	4,675,020	4,675	671,491
Miscellaneous products......	...	34,542	9,713,750	...	10,894	2,949,654
Totals, 1951	...	**3,602,957**	**782,525,015**	...	**3,335,705**	**705,273,301**
1952						
Logs and bolts...M ft. b.m.	7,272,019	1,392,947	304,262,790	7,291,744	1,397,039	303,026,856
Pulpwood............ cord	14,102,394	1,198,703	396,102,104	11,640,191	989,416	334,824,403
Fuelwood............ "	10,517,709	841,417	61,355,643	10,501,852	840,148	61,076,352
Hewn railway ties.... No.	713,924	3,570	1,292,636	713,924	3,570	1,292,636
Poles and piling....... "	1,053,243	15,799	16,961,456	807,110	12,107	12,674,011
Round mining timber. cu. ft.	49,435,386	49,435	19,917,669	11,549,576	11,549	4,556,992
Fence posts........... No.	16,096,074	19,315	3,432,675	14,409,870	17,292	2,966,683
Wood for distillation.. cord	40,027	3,202	441,443	40,027	3,202	441,443
Fence rails............ No.	4,694,624	4,695	758,519	4,694,624	4,695	758,519
Miscellaneous products......	...	36,526	11,126,259	...	12,942	3,776,396
Totals, 1952	...	**3,565,609**	**815,651,194**	...	**3,291,960**	**725,394,291**

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[1] In estimating the annual drain on Canada's forest resources, certain converting factors have been used, each of which represents in cubic feet the quantity of merchantable wood used to produce one unit of the material in question. The factor for logs and bolts for the British Columbia coastal region is 175 and for the rest of Canada 200. Other factors: pulpwood 85, fuelwood 80, hewn railway ties 5, poles and piling 15, fence posts 1·2 and wood for distillation 80.

12.—Equivalent Volume of Solid Wood Cut and Value of Products of Woods Operations, by Province, 1950-52

Province	Equivalent Volume of Solid Wood			Value of Products		
	1950	1951	1952	1950	1951	1952
	M cu. ft.	M cu. ft.	M cu. ft.	$	$	$
Newfoundland	92,086	103,953	107,531	19,397,276	22,084,403	25,186,024
Prince Edward Island	13,524	15,456	17,034	1,121,461	1,770,190	2,641,036
Nova Scotia	116,227	138,871	137,980	16,990,175	25,025,276	27,712,516
New Brunswick	220,328	273,420	251,058	40,279,504	64,635,365	63,792,776
Quebec	1,131,072	1,208,851	1,158,746	212,563,708	267,682,117	280,423,820
Ontario	652,886	695,877	709,413	133,953,112	150,920,968	170,534,331
Manitoba	77,458	87,198	87,761	9,441,487	11,551,887	13,472,295
Saskatchewan	90,734	88,656	86,739	8,590,115	8,736,785	10,513,606
Alberta	142,320	158,505	164,008	12,637,822	16,066,822	17,227,875
British Columbia	805,764	832,170	845,339	170,759,943	214,051,202	204,146,915
Totals	**3,342,399**	**3,602,957**	**3,565,609**	**625,734,603**	**782,525,015**	**815,651,194**

Subsection 2.—The Lumber Industry

The manufacture of sawn lumber is the second most important industry in Canada depending on the forest for its raw materials.

The total number of sawmills, tie, shingle, lath, veneer, stave, heading and hoop mills and mills for cutting-up and barking or rossing of pulpwood, reports of which were compiled for 1952, was 8,283 as compared with 7,934 for 1951. Mills sawing less than 15,000 ft. b.m. are excluded but account for less than one-half of one per cent of the total lumber production. Employees numbered 60,931 and wages and salaries amounted to $135,540,707. The logs, bolts and other materials and supplies of the industry were valued at $299,506,832, the gross value of production was $568,023,148 and net value $261,325,619.

Lumber production in Canada reached its maximum in 1951 at 6,948,697,000 ft. b.m. Average values were fairly uniform until 1916, but increased rapidly from 1917 to 1920, to decline gradually during the following years to the lowest level for the entire period in 1932. With the exception of 1938 and 1949, increases took place each year from 1933 to 1951; a decrease of 2 p.c. occurred in 1952.

13.—Quantity and Value of Lumber Production and Value of All Sawmill Products, by Province, 1951 and 1952

Province or Territory	Lumber Production				Value of All Sawmill Products	
	Quantity		Value			
	1951	1952	1951	1952	1951	1952
	M ft. b.m.	M ft. b.m.	$	$	$	$
Newfoundland	41,981	55,100	2,456,588	3,469,111	2,727,335	3,743,603
Prince Edward Island	10,465	9,437	543,019	498,948	610,578	578,047
Nova Scotia	331,906	296,915	19,987,788	18,101,419	21,534,108	20,162,764
New Brunswick	292,097	259,906	18,892,064	17,273,232	22,124,951	20,816,235
Quebec	1,182,986	1,093,862	78,867,947	75,064,381	89,401,801	89,264,991
Ontario	820,696	840,484	60,802,961	65,325,145	76,072,011	83,158,216
Manitoba	60,071	61,052	3,873,547	4,001,844	4,112,135	4,207,534
Saskatchewan	78,694	78,478	4,281,687	4,518,638	4,497,183	4,857,183
Alberta	398,295	409,570	20,405,750	21,457,863	22,667,881	23,862,564
British Columbia	3,723,877	3,696,459	296,883,313	272,860,148	347,147,390	316,723,587
Yukon and N.W.T.	7,629	6,331	655,577	624,594	656,376	648,424
Canada	**6,948,697**	**6,807,594**	**507,650,241**	**483,195,323**	**591,551,749**	**568,023,148**

14.—Quantity and Value of Lumber Cut, by Kind, 1951 and 1952

Kind of Wood	Quantity		Value	
	1951	1952	1951	1952
	M ft. b.m.	M ft. b.m.	$	$
Spruce	2,274,583	2,306,656	137,626,573	142,573,230
Douglas fir	1,778,048	1,742,677	143,413,098	132,244,365
Hemlock	880,354	739,833	68,120,805	55,601,867
White pine	449,686	410,518	37,825,447	36,052,264
Cedar	360,919	373,758	39,635,595	31,537,656
Yellow birch	189,754	182,427	15,688,629	15,594,552
Jack pine and lodgepole pine	309,449	304,135	17,018,456	18,307,302
Maple	123,150	132,044	10,442,033	10,981,364
Balsam fir	173,007	204,289	10,534,118	12,480,144
Red pine	84,467	72,420	6,452,850	6,054,162
Other kinds	325,280	338,837	20,892,637	21,768,417
Totals	**6,948,697**	**6,807,594**	**507,650,241**	**483,195,323**

15.—Quantity and Value of Lumber, Shingles and Lath Produced, 1943-52

NOTE.—Figures for 1908-42 are given in the corresponding table of previous Year Books, beginning with the 1931 edition.

Year	Lumber Cut		Shingles Cut		Lath Cut	
	Quantity	Value	Quantity	Value	Quantity	Value
	M ft. b.m.	$	Squares	$	M	$
1943	4,363,575	151,899,684	2,565,752	10,020,804	114,029	554,278
1944	4,512,232	170,351,406	2,697,724	11,411,359	110,639	645,010
1945	4,514,160	181,045,952	2,665,432	11,737,224	117,731	752,245
1946	5,083,280	230,189,699	2,646,022	14,512,796	134,591	908,564
1947	5,877,901	322,048,356	3,107,248	24,449,305	151,151	1,239,824
1948	5,908,798	340,850,538	3,078,215	24,470,746	149,646	1,338,534
1949	5,915,443	334,789,873	2,825,261	19,568,633	129,895	1,136,208
1950	6,553,898	422,480,700	3,191,589	31,807,753	123,118	1,134,741
1951	6,948,697	507,650,241	2,982,362	27,977,418	104,872	1,042,196
1952	6,807,594	483,195,323	2,424,818	19,269,747	111,595	1,237,227

Lumber Exports.—Exports of planks, boards and square timber are given in Chapter XXII, Foreign Trade.

Subsection 3.—The Pulp and Paper Industry*

The manufacture of pulp and paper has been the leading industry in Canada for many years and the post-war development of the industry has more than kept pace with the vast industrial growth of the nation. Pulp and paper stands first among all industries in value of production, in exports, in total wages paid and in capital invested. It is the largest consumer of electric energy and the largest industrial buyer of goods and services, including transportation, in the land. The industry has a newsprint output five times that of any other country and provides over one-half the world's newsprint needs. Canada is also the world's greatest wood-pulp exporter and stands second only to the United States as a producer of pulp. Thus, this Canadian industry, with four-fifths of its output moving abroad, ranks as one of the major industrial enterprises of the world.

There are three classes of mills in the industry. In 1952, 34 were making pulp only, 26 were making paper only and 68 were combined pulp and paper mills.

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*A special article on the pulp and paper industry appears in the 1952-53 Year Book, pp. 467-475.

The industry includes three forms of industrial activity: operations in the woods with pulpwood as a product, the manufacture of pulp and the manufacture of paper. Some of the important pulp companies operate sawmills to utilize the larger timber on their limits to the best advantage, and some lumber manufacturers divert a portion of their spruce and balsam logs to pulp-mills. Less than one-fifth of the pulpwood cut in Canada is exported in raw or unmanufactured form and a large portion of such exports is cut from private lands.

16.—Production, Consumption, Exports and Imports of Pulpwood, 1943-52

Note.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Apparent Total Production of Pulpwood in Canada			Canadian Pulpwood Used in Canadian Pulp-Mills		Canadian Pulpwood Exported Unmanufactured		Imported Pulpwood Used in Canada	
	Quantity[1]	Total Value	Average Value per Cord	Quantity[1]	P.C. of Total Production	Quantity[1]	P.C. of Total Production	Quantity[1]	P.C. of Total Consumption
	cords	$	$	cords		cords		cords	
1943..	8,801,368	110,844,790	12·59	7,260,776	82·5	1,540,592	17·5	2,379	--
1944..	8,668,566	124,363,926	14·35	7,169,430	82·7	1,499,136	17·3	8,209	0·1
1945..	9,145,673	146,172,701	15·98	7,474,375	81·7	1,671,298	18·3	4,133	--
1946..	10,523,256	183,085,359	17·40	8,667,875	82·4	1,855,381	17·6	16,881	0·2
1947..	11,484,522	237,488,741	20·65	9,500,542	82·7	1,983,980	17·3	50,508	0·5
1948..	12,497,926	284,656,819	22·78	10,180,580	81·5	2,317,346	18·5	75,969	0·7
1949[2].	11,850,254	270,697,980	22·84	10,237,976	86·4	1,612,278	13·6	5,491	--
1950..	12,873,476	285,762,620	22·20	11,138,578	86·5	1,734,898	13·5	28,220	0·3
1951..	15,053,910	381,920,846	25·37	12,182,737	80·9	2,871,173	19·1	46,634	0·4
1952..	14,102,670	396,102,104	28·09	11,609,407	82·3	2,493,263	17·7	30,784	0·3

[1] Given in terms of rough or unpeeled wood. [2] Newfoundland included from 1949.

Pulp Production.—The manufacture of pulp, the second stage in this industry, is carried on by mills producing pulp only and also by paper manufacturers operating pulp-mills in conjunction with paper-mills to provide their own raw material. Such mills usually manufacture a surplus of pulp for sale in Canada or for export. Spruce, supplemented by balsam fir in the east and by hemlock in the west, is the most suitable species of wood for the production of all but the best classes of paper.

The preliminary preparation of pulpwood is frequently carried on at the pulp-mill, but there are also a number of 'cutting-up' and 'rossing' mills operating on an independent basis, chiefly for the purpose of saving freight on material cut at a distance from the mill or on material intended for export. Pulpwood is measured by the cord (4′ by 4′ by 8′ of piled material). One cord of rough pulpwood contains approximately 85 cu. feet of solid wood, and one cord of peeled pulpwood 95 cu. feet.

Of the total 1952 pulp production, 74·3 p.c. was made in combined pulp- and paper-mills for their own use in manufacturing paper. The remainder was made for sale in Canada or for export. About 58 p.c. was groundwood pulp and almost 18 p.c. unbleached sulphite fibre, these being the principal components of newsprint paper. Bleached sulphite, bleached, semi-bleached and unbleached sulphate, soda fibre, semi-chemical, other grades and groundwood and chemical screenings made up the remainder. A considerable market has developed for screenings in connection with the manufacture of rigid insulating boards.

The manufacture of the 8,968,009 tons of pulp produced in 1952 entailed the use of 11,640,191 cords of rough pulpwood valued at $334,824,403 and the equivalent of 317,556 rough cords of other wood (i.e., sawmill chips, slabs and edgings, sawdust, butt cores, etc.) valued at $8,242,632. The total value of materials used in the manufacture of pulp was $389,372,852.

17.—Pulp Production, Mechanical and Chemical, 1943-52

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Mechanical Pulp		Chemical Fibre		Total Production[1]	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1943	2,998,913	63,426,919	2,188,026	130,010,210	5,272,830	194,519,152
1944	3,076,296	71,668,673	2,109,169	138,140,452	5,271,137	211,041,412
1945	3,341,920	86,375,001	2,154,267	144,084,969	5,600,814	231,873,122
1946	3,997,848	111,514,231	2,427,087	172,756,674	6,615,410	287,624,227
1947	4,275,269	147,423,552	2,755,977	251,273,372	7,253,671	403,853,235
1948	4,413,513	168,343,496	2,997,281	310,338,614	7,675,079	485,966,164
1949[2]	4,718,806	166,591,741	2,891,418	272,355,430	7,852,998	445,138,494
1950	4,910,803	173,035,433	3,314,250	323,330,963	8,473,014	502,583,925
1951	5,172,465	213,953,064	3,814,086	503,997,803	9,314,849	727,880,005
1952	5,175,319	217,352,245	3,518,127	423,789,033	8,968,009	650,021,180

[1] Includes screenings and unspecified pulps. [2] Newfoundland included from 1949.

18.—Pulp Production, by Chief Producing Provinces, 1943-52

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Quebec		Ontario		Canada[1]	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1943	2,617,403	94,054,176	1,490,966	54,818,046	5,272,830	194,519,152
1944	2,767,081	105,042,991	1,316,365	54,934,993	5,271,137	211,041,412
1945	2,887,176	114,197,036	1,468,682	62,596,260	5,600,814	231,873,122
1946	3,460,853	140,930,891	1,837,975	84,049,038	6,615,410	287,624,227
1947	3,751,579	194,805,327	2,100,237	122,382,058	7,253,671	403,853,235
1948	3,902,072	227,425,545	2,226,124	153,870,832	7,675,079	485,966,164
1949	3,698,401	196,568,691	2,138,444	140,662,434	7,852,998[2]	445,138,494[2]
1950	3,922,543	216,299,900	2,297,518	156,390,753	8,473,014	502,583,925
1951	4,282,568	298,100,313	2,484,551	219,571,231	9,314,849	727,880,005
1952	4,192,047	280,314,341	2,308,722	182,773,000	8,968,009	650,021,180

[1] Includes production in British Columbia, Manitoba, New Brunswick and Nova Scotia. [2] Newfoundland included from 1949.

Pulp Exports.—The chief market for Canadian newsprint and pulp is the United States. Prior to the War this market alone absorbed about 85 p.c. of the pulp exports and 80 p.c. of the newsprint exports. In 1945, the proportions were 76 p.c. and 83 p.c., respectively, and in 1952, 82 p.c. and 91 p.c., respectively.

19.—Exports of Pulp to the United Kingdom, United States and All Countries, 1943-52

Year	United Kingdom		United States		All Countries	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1943	263,392	17,349,975	1,269,043	80,969,868	1,556,457	100,012,775
1944	292,808	21,393,993	1,077,811	77,081,637	1,408,081	101,563,024
1945	290,885	22,276,514	1,093,631	79,589,366	1,434,527	106,054,911
1946	119,973	10,122,012	1,252,648	99,972,972	1,418,558	114,020,659
1947	136,976	14,741,287	1,499,302	156,121,526	1,698,712	177,802,612
1948	170,227	21,359,288	1,591,043	184,983,027	1,797,998	211,564,384
1949[1]	181,828	20,137,715	1,305,334	141,641,380	1,557,348	171,504,163
1950	117,921	13,128,894	1,694,444	191,005,507	1,846,143	208,555,549
1951	217,250	37,770,627	1,831,410	276,760,578	2,243,307	365,132,884
1952	210,285	35,208,295	1,588,978	225,082,376	1,940,579	291,863,498

[1] Newfoundland included from 1949.

World Pulp Statistics.—Figures of production, exports and imports of pulp for certain countries of the world have again become available after the interruption caused by World War II and are shown for 1952 in Table **20.** It is estimated that these countries produce approximately three-quarters of the world supply of pulp.

20.—Production, Exports and Imports of Pulp, by Leading Countries, 1952

(Source: United States Pulp Producers Association)

Country	Production	Exports	Imports
	'000 tons	'000 tons	'000 tons
Canada	**8,897**[1]	**1,941**	**55**
United States	16,464	212	1,938
Finland	2,071	949	—
Norway	1,191	590	8
Sweden	3,379	1,797	—

[1] Slightly lower than DBS figures given in Table 17, p. 466, owing to the exclusion of certain types of pulp by the Association.

Paper Production.—During 1952 there were 94 establishments producing paper and paper board in Canada as compared with 92 in 1951. In addition to newsprint, Canadian mills have a highly developed production of fine paper, wrapping paper, tissues, paper board and other cellulose products.

21.—Paper Production, by Type, 1943-52

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Year	Newsprint Paper		Book and Writing Paper		Wrapping Paper	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1943	3,046,442	152,962,868	122,174	19,047,039	145,545	15,614,453
1944	3,039,783	165,655,165	155,498	23,700,310	156,721	16,699,663
1945	3,324,033	189,023,736	162,198	24,468,409	162,175	17,558,552
1946	4,162,158	280,809,610	189,318	29,995,156	175,369	20,797,070
1947	4,474,264	355,540,669	210,762	39,727,187	188,742	26,009,996
1948	4,640,336	402,099,718	231,608	45,178,968	207,128	31,036,805
1949[1]	5,187,206	467,976,343	199,317	40,598,820	195,585	30,033,478
1950	5,318,988	506,968,207	214,097	47,356,410	222,840	37,776,291
1951	5,561,115	564,361,193	253,081	63,790,259	257,332	49,664,005
1952	5,707,030	600,515,960	229,061	57,644,636	222,529	45,356,720

Year	Paper Boards		Tissue and Miscellaneous Paper		Totals	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1943	568,101	37,528,257	84,082	8,883,535	3,966,344	234,036,152
1944	588,348	39,091,667	104,026	10,399,036	4,044,376	255,545,841
1945	595,131	40,100,872	116,039	11,686,045	4,359,576	282,837,614
1946	683,643	50,213,833	136,630	15,140,721	5,347,118	396,956,390
1947	744,377	66,126,302	156,937	19,697,123	5,775,082	507,101,277
1948	817,432	80,864,700	167,142	23,166,651	6,063,646	582,346,842
1949[1]	797,023	80,632,075	160,838	22,219,122	6,539,969	641,459,838
1950	876,894	92,531,711	179,216	25,521,207	6,812,035	710,153,826
1951	960,493	113,469,950	193,250	32,744,242	7,225,271	824,029,649
1952	870,204	105,885,607	172,976	28,702,185	7,201,800	838,105,108

[1] Newfoundland included from 1949.

Quebec produced nearly 49 p.c. of the total paper made in 1952, Ontario over 27 p.c., British Columbia almost 8 p.c. and Nova Scotia, New Brunswick, Manitoba and Newfoundland the remaining 16 p.c.

22.—Paper Production, by Province, 1951 and 1952

Province	1951		1952	
	Quantity	Value	Quantity	Value
	tons	$	tons	$
Quebec	3,511,669	339,554,493	3,515,193	400,666,379
Ontario	3,019,235	251,918,611	1,963,403	246,215,714
British Columbia	513,165	59,763,061	540,140	62,261,263
Nova Scotia, New Brunswick, Manitoba and Newfoundland	1,181,202	122,793,484	1,183,064	128,964,752
Totals	**7,225,271**	**824,029,649**	**7,201,800**	**838,105,108**

Exports of Newsprint.—Total exports of newsprint from Canada in the years 1943-52 are given in Table **23.**

23.—Exports of Newsprint to the United Kingdom, United States and All Countries, 1943-52

Year	United Kingdom		United States		All Countries	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	$	tons	$	tons	$
1943	30,427	1,773,834	2,544,691	129,787,019	2,810,288	144,707,064
1944	41,908	2,557,791	2,408,960	133,398,724	2,805,776	157,190,834
1945	105,648	6,564,645	2,533,564	146,507,805	3,058,946	170,450,771
1946	84,888	5,954,814	3,323,238	224,782,463	3,858,467	265,864,969
1947	55,520	4,623,491	3,675,349	291,892,729	4,220,779	342,293,158
1948	60,690	5,319,660	3,917,366	340,334,045	4,328,184	383,122,734
1949	108,213	9,930,070	4,346,414	395,259,575	4,789,296	440,054,067
1950	19,095	1,861,980	4,724,937	463,155,927	4,938,069	485,746,314
1951	72,205	7,488,187	4,774,947	496,852,197	5,112,061	536,372,498
1952	131,005	14,575,722	4,850,962	534,372,859	5,327,430	591,790,209

[1] Newfoundland included from 1949.

World Newsprint Statistics.—Since 1913, Canada has led the world in the export of newsprint. Figures for the leading producing countries for the two latest years available are given in Table **24**; 1939 figures are included for comparative purposes. The six countries listed accounted for 80 p.c. of the estimated world production in 1952, Canada contributing about 54 p.c.

24.—Estimated World Newsprint Production and Exports, by Leading Countries, 1939, 1951 and 1952

(Source: Newsprint Association of Canada)

Country	Production			Exports		
	1939	1951	1952	1939	1951	1952
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Canada (including Newfoundland)	**3,175**	**5,516**[1]	**5,687**[1]	**2,935**	**5,112**	**5,666**
United States	939	1,125	1,147	13	71	104
United Kingdom	848	590	601	42	106	82
Finland	550	454	480	433	415	434
Sweden	306	365	365	199	222	240
Norway	222	180	167	188	145	138

[1] Slightly lower than DBS figures given in Table 21, p. 467, owing to the exclusion of certain paper not classed as newsprint by the Association.

Statistics of the Combined Pulp and Paper Industries.*—The manufacture of pulp, the manufacture of paper and the manufacture of products made of paper may, under certain conditions, be treated as three industries, for they are frequently carried on in separate plants by entirely independent companies. The manufacture of basic stock and the converting of this paper into stationery and other highly processed paper products are often combined in one plant. This further converting of paper within the pulp and paper industry itself represents only a small part of Canada's production of converted paper and boards, the bulk of which is still made in special converting mills classified in other industrial groups.

The presence of these different combinations in one mill makes it difficult to separate many of the statistics relating to the manufacture of pulp, basic paper and converted paper products. All converting operations carried on in paper mills in this industry are attributed to the particular industrial group of converting plants to which they properly belong. Including manufacturing operations as far as the basic paper-making stage, there were altogether 128 mills in operation in 1952. The employees numbered 57,803 and their salaries and wages amounted to $225,353,327. If the pulp made for their own use in combined pulp and paper mills is disregarded, the total value of materials and supplies used in the industry as a whole can be considered as amounting to $497,046,828 in 1952, $483,014,009 in 1951, and $373,882,762 in 1950; the gross value of production as $1,157,887,657 in 1952, $1,237,897,470 in 1951, $954,137,651 in 1950; and net value of production, $584,101,072 in 1952, $679,257,743 in 1951 and $511,142,983 in 1950.

The pulp and paper industry is one of the leading single manufacturing industries in Canada. In 1952, it was first in net value of production, in gross value of production and in salaries and wages paid, and second in employment. Only the manufacturing stages of the industry are considered in these comparisons, no allowance being made for capital invested, men employed, wages paid or primary products sold in connection with the woods operations. These form an important part of the industry as a whole but cannot be separated from woods operations carried on in connection with sawmills and other industries. In world trade, generally speaking, pulp and paper are Canada's main commodities—usually more important than wheat and far more important than nickel. Newsprint alone, over a considerable period, has brought Canada more export dollars than wheat, nickel or any other single commodity.† The United States market absorbs, annually, about 85 p.c. of all pulpwood exports and over 80 p.c. of the pulp and the paper shipments of Canada. About one-half of the paper consumed in the United States is either of Canadian manufacture or is made from wood or pulp imported from Canada.

Subsection 4.—The Veneer and Plywood Industries‡

The production of hardwood plywood in Canada is largely confined to the eastern provinces. The changes in manufacturing methods applied to hardwood plywood have resulted in its adaptation to many new uses, particularly to attractive wall finishes for homes and other buildings, flush doors, radio and television cabinets and other home and office furniture.

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* *See* Chapter XV for further particulars regarding the pulp and paper and paper-converting industries.

† For reasons given in Section 1, Part II of the Foreign Trade Chapter, gold is excluded from Canadian trade statistics.

‡ Prepared by the Forest Products Laboratories, Forestry Branch, Department of Northern Affairs and National Resources, Ottawa.

Softwood plywood is produced almost solely in British Columbia. Douglas fir is the type most commonly manufactured because of the availability of large-diameter logs of this species from which large sheets of clear veneer can be obtained. The use of synthetic resin adhesives is responsible for the production of a product that has become almost indispensable to the construction industry—for wall panels, concrete forms, roofing, sheeting, house sub-floors; for construction of silos, cribs and caissons; for box-car linings, bus bodies, trailers, power-driven and other types of watercraft; for box panels and crate linings, case goods and core-stock for furniture; for plywood-faced doors and for many other uses.

The heating of glued veneers in moulds by high-frequency electric fields (dielectric heating) permits the manufacture of shaped plywood, which is now being used for furniture, radio cabinets and similar products. The possibilities of this development are becoming more widely appreciated.

Veneers of Canadian manufacture are not confined to species native to Canada. A number of imported woods of special decorative value are veneered successfully and provide the furniture industry with a wide choice of finishes. Exports of veneer and plywood produced in Canada have increased in value from $969,256 in 1938 to a high of $19,024,625 in 1953.

25.—Veneer and Plywood Produced for Sale, by Type, 1949-52

Type	1949	1950	1951	1952
Veneer (1/10 in. Basis)—				
Domestic softwood..............M sq. ft.	139,092	194,845	331,148	185,654
$	1,507,973	2,008,510	3,466,307	2,343.415
Domestic hardwood............M sq. ft.	156,462	164,719	203,521	217,550
$	3,997,363	5,483,890	7,350,044	8,863,025
Imported wood.................M sq. ft.	6,595	16,546	16,406	9,547
$	481,303	1,359,118	1,442,139	792,763
Totals, Veneer.........M sq. ft.	**302,149**	**376,110**	**551,075**	**412,751**
$	**5,986,639**	**8,851,518**	**12,258,490**	**11,999,203**
Plywood (1/4 in. Basis)—				
Domestic softwood..............M sq. ft.	360,389	389,010	482,626	464,417
$	19,749,658	22,860,818	34,047,694	32,418,606
Domestic hardwood............M sq. ft.	70,583	93,552	95,610	126,007
$	8,082,851	11,888,675	13,078,960	16,131,288
Imported wood.................M sq. ft.	3,246	2,386	5,247	4,614
$	637,170	620,925	1,523,694	1,359,621
Totals, Plywood.......M sq. ft.	**434,218**	**484,948**	**583,483**	**595,038**
$	**28,469,679**	**35,370,418**	**48,650,348**	**49,909,515**

Subsection 5.—The Wood-Using Industries

The wood-using group comprises thirteen industries,* other than sawmills and pulp mills, using wood as their principal raw material. Most of these industries obtain from the sawmills the wood they transform into planed and matched lumber, boxes, barrels, furniture, caskets and other manufactured or semi-manufactured products, but the veneer and plywood and excelsior industries usually manufacture their products direct from logs and bolts.

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* Furniture; sash, door and planing mills; veneer and plywood; hardwood flooring; boxes, baskets and crates; wood-turning; coffins and caskets; cooperage; woodenware; lasts, trees and wooden shoefindings; beekeepers' and poultrymen's supplies; excelsior; and other wood-using industries.

This wood-using group does not include every industry into which wood enters as a raw material but only those producing commodities whose chief component is wood. There are a number of industrial groups in which wood is an important raw material, such as the manufacture of agricultural implements, musical instruments, etc., and others, such as the manufacture of machinery, in which wood is necessary but only in comparatively small proportions.

Wood is used indirectly in the manufacture of all-metal products, as, for example, in the use of wooden patterns and wooden foundry boxes in making metal castings. Wood in the form of barrels, boxes and other containers also enters into the distribution of commodities of all kinds.

In 1952, the wood-using group, comprising 4,184 establishments, gave employment to 69,537 persons and paid out $163,890,274 in salaries and wages. The gross value of its products was $599,606,383 and the net value $272,829,694.

The importance of secondary industry in providing employment will be appreciated when it is noted that the number of employees in the wood-using group was more than 69,000, as compared with sawmills with approximately 61,000 employees and pulp and paper with about 58,000 in 1952.

26.—Wood Used by Wood-Using Industries, 1950-52

Item		1950	1951	1952
Sawn lumber	M ft. b.m.	1,893,861	1,981,239	2,049,314
	$	120,604,966	138,846,528	145,056,681
Sawlogs, veneer logs, flitches	M ft. b.m.	274,275	316,517	312,421
	$	18,393,062	26,015,465	26,100,966
Veneers and plywoods	M sq. ft.	274,627	267,000	302,971
	$	17,087,654	19,314,591	20,537,175
Other wood used	$	3,959,258	4,101,186	4,480,753
Totals	$	**160,044,940**	**188,277,770**	**196,175,575**

Subsection 6.—The Paper-Using Industries

The paper-using group comprises three industries* engaged primarily in manufacturing commodities of paper and paperboard. Establishments engaged in printing, publishing, bookbinding and the allied graphic arts also consume large quantities of these materials, but, under the standard industrial classification adopted by the Dominion Bureau of Statistics in 1948, they are grouped separately.

Some paper-using establishments purchase paper as a raw material from the pulp and paper industry and merely subject it to some form of treatment to fit it for further manufacture in some other industry. This occurs in the manufacture of coated, sensitized or corrugated paper. Other firms purchase paper and subject it to some treatment to fit it for some definite final use such as in the manufacture of asphalt roofing or waxed wrapping paper. Another large group uses paper and paperboard as a raw material for conversion into paper bags, boxes, envelopes, laminated wallboard and other commodities.

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* Paper boxes and bags; roofing paper; and miscellaneous paper goods.

In recent years the manufacture of containers and packages of various kinds has grown very rapidly since ways have been found of converting tough and cheap paper stocks into strongly made boxes which compete very favourably with the wooden crates and packing cases used formerly. Small attractive paper containers for use in the retail trade are growing in favour with the purchasing public and constitute an important branch of the paper-using industries.

Composition roofing and sheathing, consisting of paper felt saturated with asphalt or tar and in some cases coated with a mineral surfacing, is being increasingly used as a substitute for metal roofing, wooden shingles and siding materials. Wood-fibre building boards, some of which are produced by lamination in the paper-using industries, are now used extensively in construction, especially for insulating purposes, replacing lumber and wood lath.

The growth of the paper-using industries in Canada since 1923 reflects these developments. In 1923, the 152 establishments in this group employed 6,870 persons, distributed $7,442,102 in salaries and wages and produced goods valued at $31,760,948. In 1952, these industries comprised 415 plants, provided employment for 25,162 persons whose earnings totalled $67,328,956 and produced products worth $352,261,134.

Subsection 7.—Printing, Publishing and Allied Industries

The printing trades group is made up of five closely related industries: printing and publishing, comprised of publishers who operate printing plants; printing and bookbinding, including general or commercial printers and bookbinders; lithographing, comprised of plants specializing in that process; engraving, stereotyping and electrotyping, including photo-engraving; and trade composition or type-setting for printers. A sixth industry covering publishers of periodicals who do not print their publications has been included since 1949. Although, strictly speaking, these publishers are not manufacturers, they are closely related to the printing trades which produce the plates, cuts, etc., and print newspapers, magazines, directories, year-books, almanacs, house organs and other periodicals for them.

In 1952, the printing trades employed 59,916 persons whose earnings totalled $177,373,133. Their output was valued at $449,508,758 and the raw materials used and services received cost $138,809,747.

Periodicals valued at $184,719,634 accounted for 45 p.c. of the value of printed matter and other products, daily newspapers alone contributing $132,531,769. The value of periodicals is made up of $130,160,344 received from advertising and $54,559,290 received from subscriptions and sales of publications. In addition, the 1,405 publishers in the sixth industry reported revenues of $26,888,494 from advertising and $8,710,218 from sales of publications.

CHAPTER XI.—MINES AND MINERALS

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Canada's Mineral Resources

The tremendous expansion that has taken place in Canada's mineral industry from the end of World War II to 1951 is reviewed in the 1952-53 Year Book, pp. 476-495. The information is brought up to June 1953 in the 1954 Year Book, pp. 482-506, and is continued to June 1954 in the following article.

DEVELOPMENTS IN CANADA'S MINERAL INDUSTRY, JULY 1953 TO JUNE 1954*

In 1953, three years after it had attained the billion dollar goal in the annual value of its output, Canada's mineral industry had covered one-third of the intervening distance to a new goal of two billion dollars, preliminary value of output in 1953 being $1,331,211,503. Whether this rate of growth would continue, and the industry would reach this new goal in another six years, was somewhat uncertain at the close of the present review period (June 1954). Year by year since 1944 when the output was valued at $485,819,114 the industry has been setting new records. Rising metal prices have contributed notably during the post-war period to the annual production increases. Copper, for instance, rose from an average of 12·67 cents a pound in 1946 to a post-war peak average of 29·93 cents in 1953; nickel from 31·50 cents to 55·87 cents in the same period; zinc from 7·81 cents in 1946 to a post-war peak average of 19·90 cents in 1951; and lead from 6·75 cents to 18·40 cents in the same period. The main contributing factor, however, has been the increase in crude-oil production following the discovery of the Leduc field in Alberta in February 1947. The developments that followed resulted in an increase in the value of crude-oil production from $14,989,052 in 1946 to a record $198,111,542 in 1953. Actually, with the major exceptions of gold and coal, all branches of the mineral industry have shared in the post-war expansion.

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* Prepared under the direction of Marc Boyer, Deputy Minister, Department of Mines and Technical Surveys, as follows: Introduction, Metals and Coal by G. H. Murray, Chief, Editorial and Information Division, and Mrs. M. J. Giroux of the Editorial Staff; Industrial Minerals by M. F. Goudge, Chief, Industrial Minerals Division; and Petroleum and Natural Gas by Dr. G. S. Hume, Director General of Scientific Services.

However, there has been some slowing in the tempo of activity. The prices of lead and zinc have declined 5·23 cents and 7·94 cents a pound, respectively, from the post-war peak averages of 1951 and this has led to a curtailment of operations at several properties. Production of iron ore, asbestos, and coal was declining in the closing months of the review period, July 1953-June 1954. Also, many of the projects connected with the pre-production development of mineral deposits, such as the construction of the 360-mile railway to connect the Quebec-Labrador iron-ore deposits with the port of Sept Iles, are now completed or are nearing completion and the stimulus they provided in mining expansion has largely spent its force.

Thus, the outlook for the mineral industry was less bright at the end of the review period than it had been the previous year or two, though it was far from unfavourable. Some monthly production figures have been rising, others declining, but the over-all productive potential of the industry has been increasing steadily. Crude oil pipelines and related facilities completed or under construction will be capable of handling 600,000 bbl. daily, close to three times the present rate of output. Moreover, the known reserves are considered to be sufficient to maintain this higher rate for many years. Within a decade Canada will be capable of producing 30,000,000 or more tons of iron ore a year compared with the output of 6,501,060 tons in 1953. The base-metal industry has undergone notable improvement as a result of recent discoveries and of expenditures totalling upwards of $300,000,000 during the past several years in plant extension and in the construction of new units. Completion of a project at Winnipeg and another near Quebec City will give the cement industry a total capacity of 25,700,000 bbl. a year, compared with 22,500,000 bbl. early in 1953. There has been a corresponding increase in the productive capacity of the asbestos industry as a result of mill construction and the development of new deposits. In the search for oil on the western plains tremendous quantities of natural gas are being disclosed, part of which will be flowing eastwards to Ontario and Quebec within a few years should present plans materialize.

The fact is that in the past ten to fifteen years Canada has been finding it has a mineral estate richer by far in resources than had been previously estimated. The development of this estate is still in a comparatively early stage, for as yet large areas remain wholly unexplored, or have been only partly explored for minerals. The development is being expedited by the use of air transportation in the outlying areas and by the demonstrated willingness of mining and exploration companies to take the necessary risks in expending large amounts on the search for and development of deposits.

The potentialities of this expanding mineral estate are indeed great and, although the aforementioned goal of two billion dollars is possibly more than six years away, it is by no means visionary. The indications are that iron-ore output alone will have reached a value of $400,000,000 a year within a decade and that crude petroleum may equal or even exceed that amount. Actually, a combined value of a billion dollars a year for the two minerals does not appear far distant. Metal production, exclusive of iron ore, has already reached nearly $700,000,000 in annual value and a substantial increase in demand and the resultant higher prices could well raise this amount by 10 to 20 p.c., taking into account the increasing productive potential of the metal-mining industry. The non-metallic minerals exclusive of crude oil and natural gas but including coal, were valued at $413,785,000 in 1953 and, again, the industries concerned are capable of considerably larger output than at present. Figures on the value of output of uranium are not published but it is evident from recent developments and from the interest being shown in the search for deposits that Canada's position as a leading source of supply is assured for years to come. This is particularly important in view of the developing uses of atomic energy in industry.

The following articles on the metals, the industrial minerals, crude petroleum and natural gas, and coal that follow, shed much further light on the potentialities of the mineral industry and provide informative accounts of the principal developments during the review period. They do not, however, deal with developments in Yukon Territory and the Northwest Territories as these are covered separately at pp. 24-25.

The Metals

Probably the most noteworthy developments in metal mining during the review period were the completion of the 360-mile railway into northern Quebec-Labrador which opens the way to the establishment of a great new iron-ore industry in Canada, and the discovery of important base-metal deposits in the Manitouwadge area north of Lake Superior in northwestern Ontario. Of great significance, too, were the strides made by Gaspe Copper Mines Limited in building up a new copper-mining operation in Gaspe, which is expected to get under way late in 1954, and the marked growth in iron-ore mining operations in the Steep Rock area of northwestern Ontario.

Production of metals in 1953 declined $19,000,000 from the 1952 value to $708,913,000, because of lower lead and zinc prices and of prolonged labour strikes in the Porcupine gold camp of Ontario and in the Noranda area of Quebec. However, the results of an enhanced production potential were seen, in part, in the increase of 23 p.c. in the volume of output of iron ore during 1953, of 20 p.c. in silver output, 17 p.c. in lead, 7 p.c. in zinc and 2·4 p.c. in nickel. Several new sources of metal production were opened up. Manitoba joined the list of nickel producers with the entry into production of the Lynn Lake nickel-copper deposits. In northern Saskatchewan the commencement of production at the Crown-owned Ace-Fay property in the Beaverlodge area served to underline Canada's importance as a producer of uranium. In Quebec, the first production of copper and gold came from the Chibougamau area with the start of operations by the Opemiska Copper Mines (Quebec) Limited. Meanwhile, in northeastern New Brunswick developments in the Bathurst area point to the eventual establishment of a large-scale base-metals industry.

Accounts of developments in metal mining on a regional basis follow.

British Columbia.—British Columbia with its great wealth of minerals is Canada's second largest metal-producing province. Although declines in the prices of lead, zinc and gold have caused a temporary slackening in metal-mining activity, interest in the Province's mineral potentialities has remained at a high level as evinced by the widespread exploration being carried on, particularly in northern areas, and by various developments under way, such as the steady building up of substantial tungsten and iron-ore industries.

British Columbia's wealth of water-power resources is playing a vital role in the expansion of metal-mining activity in the Province. This is readily seen in the scope of operations of the Consolidated Mining and Smelting Company of Canada Limited, the Province's metal-mining giant, which now has a total output of 400,000 h.p. The latest addition to its hydro power was made by the Company in March 1954 when it set into operation the first two units, of 105,000 h.p. each, of its new $35,000,000 Waneta power plant on the Pend d'Oreille River. The availability of water-power resources has also made possible the huge Kitimat aluminum project, where initial production started in 1954. A projected use of these same resources which will greatly benefit metal mining both in the Province and elsewhere is planned by Frobisher Limited and Quebec Metallurgical Industries Limited. These companies have been surveying the water-power resources of Yukon Territory and northern British Columbia and plan on establishing metallurgical industries in those northern areas for the treatment of ores from Canadian and world-wide sources.

British Columbia in 1953 accounted for 78 p.c. of the Canadian tonnage of lead produced and 47 p.c. of the zinc. Most of the output comes from the Sullivan mine of Consolidated Mining and Smelting Company near Kimberley, the largest lead-zinc-silver mine in the world. The Company is Canada's largest producer of silver and the only Canadian producer of antimony, indium and tin. It also produces bismuth and cadmium as by-products. The remainder of the Province's metal output is comprised mainly of copper, gold, iron ore and tungsten.

The continued decline in lead and zinc prices resulted in a steady decrease in the value of British Columbia's mineral output from a record $176,279,000 in 1951 to $160,741,000 in 1953. Eighteen producers have suspended operations; several have reduced operations considerably, one of these—Canadian Exploration Limited—having cut the milling rate at its Jersey mine by one-half; and several have postponed opening up new properties pending an improvement in the lead and zinc prices. Despite this, the Province's output of lead increased 48,000,000 lb. over 1952 to 307,178,000 lb. in 1953, and zinc increased 27,000,000 lb. to 375,538,000 lb. Values, however, were down, lead declining almost $1,500,000 to $40,471,000 and zinc $16,000,000 to $44,914,000. On Jan. 1, 1954, Consolidated Mining and Smelting Company reduced its production of refined zinc by 25 p.c.

On the brighter side, copper, iron ore and tungsten all showed increased tonnages and values of output in 1953 and strong possibilities for continued growth. Copper production comes from the Granby Consolidated Mining, Smelting and Power Company Limited in the Yale district near Princeton, and from Britannia Mining and Smelting Company Limited, north of Vancouver. Interesting copper deposits are being explored and developed in the northwestern part of the Province in the Unuk area, 20 miles north of Premier, and in the areas east and north of Vancouver.

An important iron-ore industry is taking shape on Vancouver and Texada Islands. Production, all of which is shipped to Japan, comes from the Iron Hill mine of the Argonaut Company Limited, the larger producer, and from three deposits of Texada Mines Limited on Texada Island. Output in 1953 amounted to 988,000 tons valued at $6,745,000, compared with 900,000 tons valued at $5,444,000 in 1952.

The Province is now a leading producer of tungsten concentrates: its output in 1953 was 2,336,000 lb., an increase of 63 p.c. over the 1952 figure. Production comes mainly from the Emerald mine of Canadian Exploration Limited near Salmo. A second producer, Western Tungsten Copper Mines Limited, is carrying out considerable development work in its Red Rose mine near Hazelton.

Most of the silver output comes as a by-product of base-metal operations. Output in 1953 increased 3,700,000 oz. t. over 1952 to 11,480,000 oz. t.

The Province's four gold producers—Pioneer Gold Mines of B.C. Limited and Bralorne Mines Limited in the Bridge River district, the Cariboo Gold Quartz Mining Company Limited in the Cariboo district, and Kelowna Mines Hedley Limited in the Osoyoos mining division—have been carrying out considerable underground development to expand reserves. Near the close of the review period underground development at Bralorne Mines revealed interesting ore at depth. The Province's gold production of 267,000 oz. t. in 1953 was little changed from 1952.

The Prairie Provinces.—Developments during the review period brought Saskatchewan and Manitoba, hitherto minor metal producers, rapidly to the forefront in Canadian mineral production—Saskatchewan as the leading Canadian producer of uranium ore, and Manitoba as Canada's second nickel-producing province. Metal production in the Prairie Provinces, otherwise, continued to be confined to the Flin Flon mine of Hudson Bay Mining and Smelting Company Limited on the Manitoba-Saskatchewan border, and to a subsidiary base-metal producer and two gold producers, all in Manitoba.

In northern Saskatchewan exploration and development activity in the search for uranium in the Beaverlodge area reached new levels. Of the record number of 18,000 claims staked in the Province during 1953, most were in this region. As a result of discoveries made during the review period, the area now extends from the Alberta boundary eastwards for about 80 miles along the north side of Lake Athabasca. Top-ranking developments in the area were the bringing into production of the Crown-owned Ace-Fay mine of Eldorado Mining and Refining Limited in April 1953, and the disclosure of a large deposit of uranium on the property of Gunnar Mines Limited. At the Ace-Fay property the new carbonate leaching plant has an initial capacity of 500 tons. Provision for the treatment of custom ores has been made in the form of underground storage bins and of special crushing and sampling equipment. Throughout the period Eldorado continued to work the nearby RA group of claims and the Bolger claims, along with those leased from Radiore Uranium Mines Limited. Gunnar Mines Limited carried out extensive work on its property in the St. Mary's Channel section of the area. In March 1954 the Company announced plans for the construction of a 1,250-ton mill with output scheduled to start in September 1955. The value of the orebody has been placed by the Company at more than double the June 1953 estimate of $65,000,000. Present reserves are estimated to be sufficient for from 10 to 12 years of operation.

Elsewhere in the Beaverlodge area, private companies explored nine properties by adits or shafts and 47 by diamond drilling. Surface trenching and prospecting were carried out on several others. Some exploratory and development activity was also carried on in the Stony Rapids-Porcupine River, Foster Lake, and Lac La Ronge regions.

Nickel and copper were added to Manitoba's metal output early in 1954 with the commencement of production at the Lynn Lake mine of Sherritt Gordon Mines Limited following one of the most ingenious feats ever performed in the history of

Canadian mining—the stripping and removal of the equipment of a mine and of a whole town to the site of a new industry 144 miles away. Using tractor trains supplemented by air transport the Company during the past few years moved the equipment of its former mine at Sherridon and the houses, school, etc., of the town, numbering to date 183 units, lock, stock and barrel to Lynn Lake. The new industry at Lynn Lake also necessitated the building of a 144-mile railway from Sherridon to Lynn Lake which was completed in November 1953, and the construction of a power plant on the Laurie River, 44 miles south of Lynn Lake. The nickel concentrates from the Lynn Lake mine, and eventually the copper concentrates are to be treated at a refinery now nearing completion at Fort Saskatchewan, 15 miles northeast of Edmonton, Alta. The cost of the whole project without the railway, has been estimated at $46,800,000. The first shipment of nickel concentrates to the Company's new nickel refinery was made early in 1954. Meanwhile, the copper concentrates are being shipped to Noranda, Que., for treatment by Noranda Mines Limited. The daily milling rate at the Lynn Lake mine will be 2,000 tons for an annual production of 8,500 tons of nickel, 4,500 tons of copper, 300,000 lb. of cobalt and 70,000 tons of fertilizer.

Hudson Bay Mining and Smelting Company continued to carry out a vigorous program of exploration and development work on its various properties in Manitoba and Saskatchewan. These include the Schist Lake mine and the Cuprus mine of its subsidiary, Cuprus Mines Limited, both in Manitoba. Late in 1953, Hudson Bay Mining and Smelting Company discovered the Coronation deposit near Phil Lake, 13½ miles southwest of Flin Flon in Saskatchewan. The Company reported a higher output of both copper and zinc in 1953 than in 1952, the output of zinc being 131,190,000 lb., the highest on record and largely attributed to the operation of the new zinc fuming plant in which the Company is treating zinc plant residues as well as current production.

Gold output in the Prairie Provinces comes as a by-product from Hudson Bay Mining and Smelting Company operations and from two gold producers in Manitoba—San Antonio Gold Mines Limited in the Rice Lake district, and Nor-Acme Gold Mines Limited at Snow Lake. Output in 1953 totalled 219,705 oz. t., of which 110,650 oz. t. came from the Flin Flon mine. Silver is also produced as a by-product, output in 1953 amounting to 1,665,000 oz. t. compared with 1,592,000 oz. t. in 1952.

At the time of writing (June 1954) some interest was being shown in an iron-ore discovery 60 miles northwest of the town of Peace River. The discovery was reported as oölitic siderite, a lower grade concentrating ore.

Ontario.—The discovery of what appear to be important deposits of uranium in the Blind River and Bancroft areas of northern and southeastern Ontario, respectively, and of new sources of base-metal wealth north of Lake Superior is probably the most newsworthy feature of metal mining in Ontario during the review period. Coupled with this is the notable headway made in the expansion of the industry in general, and of its nickel and iron-ore production potential in particular.

The value of mineral output in the Province, Canada's leading mineral producer, rose $16,000,000 over 1952 to $460,000,000 in 1953 and represented 34 p.c. of the total value of Canadian mineral production. In metal-mining, Ontario continued to account for all production of cobalt and the platinum metals, a major share of the iron ore, and for over one-half of the copper and gold. With the exception of gold and silver, each of the principal metals and minerals produced in the Province showed an increase in both volume and value of output over 1952.

The continuing high demand for nickel for civilian and defence purposes further stimulated the expansion under way within the nickel-copper industry in the Sudbury area. The International Nickel Company of Canada Limited, the source of 73 p.c. of the world output of nickel, has practically completed the $150,000,000 expansion program commenced almost a decade ago. The program has included the changeover from open-pit and underground mining to almost entirely underground mining, as well as the mining of low-grade ore at its Creighton mine through the utilization of caving, a low-cost bulk mining method. During the review period the Company further raised the capacity of the concentrator at its Creighton mine from 10,000 to 12,000 tons. At the end of 1953, International Nickel Company's nickel-producing capacity was over 275,000,000 lb. a year compared with 250,000,000 lb. at the end of 1952. Capacity will be further increased by output from a $16,000,000 plant now under construction in which nickeliferous pyrrhotite will be treated for the recovery of nickel and high-grade iron ore. The process involved is the result of years of research. It is expected that the plant will eventually produce 1,000,000 tons of iron ore a year.

Falconbridge Nickel Mines Limited, the other major producer, is also expanding its nickel-producing capacity, and during the review period raised its sights to a production of 55,000,000 lb. by 1960. Ore handled in 1953 totalled 1,298,000 tons, an increase of 169,000 tons over 1952, of which 134,000 tons came from three new and independent producers in the area—Milnet Mines Limited, East Rim Nickel Mines Limited and Nickel Offsets Limited. Most of the Company output came from the Falconbridge and McKim mines.

The program involves the bringing in of six new mines, all on the rim of the Sudbury basin—the Falconbridge East, Mount Nickel, Hardy, Boundary, Longvack and Fecunis mines. Three of these, the Falconbridge East, Mount Nickel and Hardy mines, are expected to start production in 1954. The Boundary and Longvack mines have small ore reserves but they will contribute to production until the large Fecunis orebody comes into full operation in 1958. The expansion in refinery capacity at Kristiansand, Norway, includes a new cobalt refinery.

International Nickel Company accounts for 90 p.c. of Ontario's output of copper and Falconbridge Nickel Mines for most of the remainder. Output in 1953 rose to 130,000 tons, an increase of 5,000 tons over 1952.

The Canadian nickel industry is the source of all of Canada's output of the platinum metals which in 1953 amounted to 296,000 oz. t. compared with 280,000 oz. t. in 1952.

A high level of development activity was maintained throughout the review period in Ontario's three iron-ore fields—the Steep Rock and Michipicoten fields in northwestern Ontario which at present account for all of the Province's output of iron ore, and the Marmora field in southeastern Ontario from which initial production is expected late in 1954. Present plans indicate a total output of 12,000,000 tons of iron ore from these fields by 1960. Output in 1953 amounted to 2,529,464 long tons compared with 2,426,330 long tons in 1952. Most of Ontario's output is exported to the United States where it is in demand because of its high grade and good furnace qualities, and most of the ore used in Ontario blast furnaces is imported from the United States.

At Steep Rock Mines Limited, expansion plans are designed to increase production to 5,500,000 long tons annually from an output of 1,301,000 long tons in 1953. Production in 1954 is expected to equal that of 1953. During the review period operations ceased at the Errington open pit and production was started from the Errington No. 1 underground mine and from the Hogarth open pit. A 70-mile highway was built into the area to Atikokan, giving the settlement access by road to Port Arthur, 140 miles to the east.

Caland Ore Company, a subsidiary of Inland Steel Company which has leased the 'C' orebody from Steep Rock mines, has set under way a $50,000,000 program to develop the deposit toward production. The Company's objective is 3,000,000 tons annually which will eventually bring annual production from the Steep Rock area close to 10,000,000 tons.

In the Michipicoten area, Algoma Ore Properties Limited has announced a $13,000,000 four-year program to provide 50,000,000 tons of iron ore or 30,000,000 tons of high-grade sinter over the next 20 years. This is to be done by opening up a new ore zone in the Helen, Victoria and Alexander mines to full operation when present producing levels are exhausted. Output in 1953, which came from the Helen and Victoria underground mines, totalled 1,167,000 long tons of high-grade sinter. Of this, 34 p.c. was shipped by rail to Algoma Steel Corporation at Sault Ste. Marie, Ont., and the remainder to the United States. Estimated production for 1954 is about 1,500,000 tons.

In southeastern Ontario, Marmoraton Mining Company Limited, a subsidiary of Bethlehem Mines Corporation, moved toward initial production, expected in 1954, from its orebody at Marmora about 32 miles east of Peterborough. It proceeded with the stripping of the 120-foot limestone capping over the orebody, the necessary construction for open-pit operations, and the erection of a docksite at Picton on Lake Ontario. The deposit contains an estimated 18,000,000 tons of magnetite ore. This ore is to be concentrated and pelletized, the production objective being 500,000 tons of agglomerated concentrates per year. Output will be shipped to Bethlehem Steel Corporation's mills near Buffalo, N.Y., U.S.A.

Two other iron-ore deposits were in the news during the review period. What appears to be an extensive deposit of magnetite was discovered early in 1954 at Bruce Lake in northwestern Ontario, 30 miles southeast of Red Lake. Iron Bay Mines Limited is exploring the deposit. In Boston Township, six miles south of Kirkland Lake, Jones and Laughlin Steel Corporation took a two-year option on a large low-grade magnetite deposit owned by Dominion Gulf Company with a view to leasing the property if exploratory work proves successful.

Despite the fact that the Government of Canada lowered its incentive price for cobalt in ores and concentrates from the Cobalt area during the first quarter of 1953, the area continues to be the scene of much activity as the search for the metal continues and further extensions are made to mine and mill facilities. Shipments from the area in 1953 were made almost entirely to Deloro Smelting and Refining Company Limited at Deloro, Ont. Up to Mar. 31, 1954, the Company acted as an agent of the Canadian Government under the premium price plan, at which time the plan ended. The United States Government subsequently contracted with the Canadian Government to purchase ores from the Cobalt area at a price commensurate with that in effect prior to Mar. 31, 1954. During the review period, Cobalt Chemicals Limited placed its new custom smelter in the Cobalt area into full production at 15 tons of concentrates daily under the management of Quebec Metallurgical Industries Limited. Cobalt Chemicals was also appointed to act as a Canadian Government agent for the purchase of the area's ores and concentrates.

Most of the silver output comes from the Cobalt area and the remainder as a by-product from International Nickel Company's operations and from the Province's gold mines. Output in 1953 amounted to 5,051,000 oz. t., 22 p.c. below the 1952 figure.

The Province has long been Canada's leading gold producer and in 1953 accounted for 53 p.c. of the output. Production, which came from 38 gold mines in the Patricia, Thunder Bay, Porcupine, Kirkland Lake, and Larder Lake areas and as a by-product from the base-metal mines of the Sudbury area, in 1953 declined 331,000 oz. t. below the 1952 total of 2,183,000 oz. t.—the result of labour strikes in the Porcupine area and of the closing of five mines owing to high costs or depleted ore reserves. However, Kerr-Addison Gold Mines Limited, Canada's leading gold producer, maintained production at approximately 1952 levels while operations in the Thunder Bay and Patricia districts recorded favourable performances.

During the review period, exploratory activity in the search for new sources of mineral wealth was widespread in the Province, a record 27,000 claims being staked in 1953. A number of important finds were made, including interesting deposits of uranium ore in the Blind River and Bancroft areas which focussed attention on the Province as a possible future source of the ore. In the Blind River area the discovery of uranium-bearing ore by Peach Uranium and Metal Mining Limited and Preston East Dome Mines Limited set off a staking rush into the area in the summer of 1953. Staking spread rapidly eastward as far as the Temagami area near North Bay. Around Blind River, several companies carried out considerable development work on their properties and Algom Uranium Mines Limited, a subsidiary of Preston East Dome Mines, and Pronto Uranium Mines Limited, a subsidiary of Peach Uranium and Metal Mining, are each proceeding with development work with a view to production. In southeastern Ontario much staking in the search for uranium has been done, particularly around Bancroft. Centre Lake Uranium Mines Limited has been carrying out underground exploration of its property in the area.

Meanwhile, in the North Bay area, Beaucage Mines Limited, a subsidiary of Inspiration Mining and Development Company Limited, continued to explore its niobium (columbium)-uranium discoveries on and near the Manitou Islands in Lake Nipissing, and to seek an economical means of treating the ore.

Events during the period also pointed up Ontario's potentialities as a base-metal producer. The discovery of a large deposit of copper-zinc ore near Manitouwadge Lake, about 40 miles northeast of Heron Bay on Lake Superior, reported in December, set off Ontario's second great staking rush of the period. Geco Mines Limited, which was formed to explore the property, is planning production from the deposit. Other interesting finds have also been reported in the area. In May, the House of Commons passed a Bill authorizing the construction by the Canadian National Railways of a 27-mile railway line from Hillsport on the main line of the Canadian National Railways into the area at an estimated cost of $3,750,000.

Meanwhile, in the Sudbury area, Ontario Pyrites Company Limited continued to explore its extensive zinc-copper-lead properties 18 miles northwest of Sudbury and research is being carried out on economical methods of extracting the metals from the ore. The Company is planning a daily milling rate of 1,500 tons.

Quebec.—The marked growth of the mineral industry in Quebec during the past few years has gone hand in hand with the Province's great industrial expansion, and has contributed notably to it. Events during the review period brought Quebec to the threshold of production both from the Quebec-Labrador iron ore deposits of Iron Ore Company of Canada and from the copper development of Gaspe Copper Mines Limited in Gaspe. The Province's potentialities as a producer of iron ore were further pointed up by the discovery of other important deposits west of Ungava Bay. Of much significance, too, was the long-awaited commencement of production from the Chibougamau area.

Quebec is next to Ontario in annual value of Canadian mineral production. It is the second largest producer of copper, gold and zinc and the only producer of molybdenite, which is mined in Abitibi East County, and of titanium ore, which comes from the large deposits of ilmenite at Allard Lake in eastern Quebec. The Province also produces silver and lead. Mineral production in 1953 declined $18,000,000 in value from 1952 to $252,826,000 mainly because of the loss in output of copper, zinc and gold caused by labour strikes at Noranda Mines Limited, Quemont Mining Corporation Limited, Normetal Mining Corporation Limited, and Waite Amulet Mines Limited.

Top-ranking development in metal mining in Quebec is the establishment of a great new iron-ore industry in Quebec-Labrador where Iron Ore Company of Canada has already outlined over 400,000,000 tons of iron ore, and where exploration during 1953 brought to light several new deposits of concentrating ore. During the review period the Company proceeded to put the finishing touches on the various phases of the great $250,000,000 project preparatory to initial production in August 1954. The 360-mile railway connecting Sept Iles with Schefferville (Knob Lake) was completed with the exception of the ballasting which will be finished by August 1954. At the northern terminus of the railway the new town of Schefferville is being built up rapidly. Dock construction and the installation of ore-handling machinery at Sept Iles were almost completed. Hydro-electric power for Schefferville and the mine will come from the Menihek dam and power-house, while power for the town of Sept Iles and the ore-handling equipment will come from the Ste-Marguerite power site. Mining will start from the Ruth No. 3 orebody which is close to the railway and which has been stripped for open-pit operations.

Much exploration of the Labrador Trough has been carried on during the past few years. Geological observations from aircraft indicate that the north end of the iron-bearing Trough may be at Diana Bay on Hudson Strait instead of 300 miles to the south as indicated on the most recent geological map of Canada. Several companies have secured concessions or claims in the Trough, some of which were actively explored during the review period. One of these companies, Fenimore Iron Mines Limited, which has recently undergone reorganization, is doing exploratory work on its properties near Ungava Bay. Drilling has outlined extensive deposits of low-grade iron ore which will require up-grading before marketing.

Most of Quebec's base-metal production comes from the western part of the Province, the chief source of output being the copper-gold-silver-pyrite Horne mine of Noranda Mines Limited. The output of copper in 1953 declined 29,881,000 lb. from 1952 to 107,811,000 lb., and of lead, 2,682,000 lb. to 18,358,000 lb. Zinc output increased 11,334,000 lb. to 201,131,000 lb. but decreased by $9,083,000 in value to $24,055,000.

Operations were suspended at the Noranda mine and smelter on Aug. 22, 1953, by a labour strike which lasted until Feb. 13, 1954. The Company treats ore from its Horne mine and custom ores and concentrates from other copper, gold and silver mines. It recovers the copper and precious metals from the anodes at the electrolytic copper refinery of its subsidiary, Canadian Copper Refiners Limited, Montreal East.

During the review period Noranda Mines Limited contracted to bring the Macdonald Mines Limited property in the Noranda area into operation at a daily rate of 1,500 tons for the production of pyrite, zinc and sulphur. West Macdonald Mines Limited, as the new Company is known, is expected to be ready for production by the end of 1955. The ore will be treated in a new $5,000,000 plant to be built at Noranda. Noranda is building a sulphur-iron plant near Welland, Ont., to treat pyrite ore from the Horne mine and concentrates from the West Macdonald property. The Company is also building a plant at the Horne mine in which by-product pyrite will be pelletized for shipment to the Welland plant.

Copper production also comes from the copper-zinc ores of Waite Amulet Mines Limited, Quemont Mining Corporation Limited, Normetal Mining Corporation Limited, and East Sullivan Mines Limited all in western Quebec. In southern Quebec it comes from the zinc-lead-copper Suffield property of Ascot Metals Corporation Limited in the Eastern Townships and the copper-pyrite-zinc mine of Weedon Pyrite and Copper Corporation Limited in Wolfe County. A new producer, Quebec Copper Corporation Limited, commenced production in February 1954 on the former Huntingdon property in the Eastern Townships. In Montmagny County, Eastern Metals Corporation Limited proceeded with the underground exploration of its nickel-copper property. The Company plans to construct a 1,500-ton capacity concentrator. An associate company, Eastern Smelting and Refining Company Limited, was formed in May 1953 to construct and operate a smelter at Chicoutimi for the treatment of nickel and copper concentrates, a substantial quantity of which is to come from the operations of Eastern Metals Corporation.

The long-awaited production of copper and gold from the Chibougamau area began in December 1953 from the 400-ton mill of Opemiska Copper Mines (Quebec) Limited. Much exploratory and development work has been carried out in the area since access to it was provided in the form of a highway from St. Felicien on the west side of Lake St. John a few years ago. Among the companies active in the area are Campbell Chibougamau Mines Limited, which is expected to start production in 1955 from a 1,700-ton mill, and Chibougamau Explorers Limited, which is doing extensive development work on its property.

Hydro-electric power is expected to reach the Chibougamau area by 1955 and a Bill authorizing the construction by the Canadian National Railways of a 294-mile railway line into the area was passed in the House of Commons in May 1954. The railway, estimated to cost $35,000,000, will run from Beattyville, near Barraute, northeast to Chibougamau and then southeast to St. Felicien.

Large new tonnages of copper ore are in the offing of Quebec's metal production as a result of the headway made by Gaspe Copper Mines Limited in preparing its $40,000,000 copper project in Gaspe peninsula for production early in 1955. The new industry is taking shape about 60 miles west of the town of Gaspe where the Company has outlined an estimated 70,000,000 tons of low-grade copper ore. Milling, which will be at a daily rate of 6,500 tons, the largest initial milling rate in Canadian mining history, is to start late in 1954 and will be followed a few months later by smelter production at the rate of 125 tons of copper anodes daily. A town, Murdochville, named after J. G. Murdoch, President of the parent company, Noranda Mines Limited, has been founded with all the services of modern living. Hydro-electric power will be supplied from the Bersimis River power development on the north shore of the St. Lawrence River.

Quebec's largest zinc producer, Barvue Mines Limited, which commenced production in 1952, completed stripping the clay overburden from its large zinc-silver deposit in Barraute township. During the review period it milled over 5,000 tons daily and produced over 5,000 tons of zinc concentrates monthly.

The base-metal industry has a new producer in United Montauban Mines Limited, which commenced the output of zinc and lead concentrates in a new 500-ton mill at its property in Portneuf County just west of Quebec City in August 1953. All zinc concentrates produced in the Province are exported to the United States or to Europe.

Lead concentrates were produced by New Calumet Mines Limited in Pontiac County, Anacon Lead Mines Limited and United Montauban Mines Limited in Portneuf County, Golden Manitou Mines Limited in Abitibi County and by Consolidated Candego Mines Limited in North Gaspe County.

About 73 p.c. of Quebec's gold output comes from 16 producing mines all in western Quebec, and the remainder from base-metal operations, chiefly Noranda Mines and Quemont Mining Corporation in the same area. Lamaque Gold Mines Limited is the largest lode gold producer. Production from the Province declined 95,000 oz. t. from 1952 to 1,019,000 oz. t. in 1953. New production has been added with the commencement of operations at Opemiska Copper Mines in the Chibougamau area where several other companies are actively developing properties. In the Noranda district preparations are being made to carry out underground development on the new gold-mining property of Eldrich Mines Limited.

Silver is recovered mainly as a by-product of base-metal mining, with a small production coming from gold-mining operations. Output in 1953 increased 201,000 oz. t. from 1952 to 4,737,000 oz. t.

Canada's sole producer of molybdenite is Molybdenite Corporation of Canada Limited about 25 miles north of Val d'Or in western Quebec. The Company ceased operations in mid-1953 to expand its mine and mill facilities to 500 and 350 tons a day, respectively. Production was resumed in March 1954.

Meanwhile at Sorel, Quebec Iron and Titanium Corporation continued to operate its experimental smelting plant for the treatment of ilmenite ore from the deposits at Allard Lake. Production is in the form of iron and titanium dioxide concentrate. Shipments from Sorel during 1953 amounted to 141,000 tons of concentrate containing approximately 98,660 tons of titanium dioxide.

The Maritime Provinces.—Highlight of metal-mining activity in the Maritimes during the review period was the proving-up of one of Canada's largest base-metal orebodies at Austin Brook near Bathurst in New Brunswick by Brunswick Mining and Smelting Corporation Limited. The discovery, which was made late in 1952, brought widespread staking in its wake and the disclosure of other important orebodies in the area. In Nova Scotia, Mindamar Metals Corporation Limited, a subsidiary of Dome Mines Limited and the only metal-producer in the Maritime Provinces, has met with encouraging results from underground development work at its mine near Stirling in Richmond County.

The establishment of a base-metals industry at Bathurst has opened up new economic vistas to New Brunswick which has no metal production of any kind. Activity since the discovery has been maintained at a high level, over 40,000 claims being staked in 1953 in one of the greatest staking rushes in Canadian mining. Two major new orebodies were discovered within a five-mile radius of the original discovery at Austin Brook—the Anacon-Leadridge and the Larder "U" properties.

During the review period, Brunswick Mining and Smelting Corporation carried out extensive exploration by drilling on its large zinc-lead-pyrite deposit. In September 1953, the Company acquired the Anacon-Leadridge property to be developed simultaneously with the Austin Brook deposit, both of which are estimated to contain in excess of 60,000,000 tons to a depth of 1,000 feet, averaging 5·3 p.c. zinc and 1·7 p.c. lead. The Company plans to build a 150-ton test mill at the property, designed on the basis of metallurgical tests made in the mineral-dressing laboratories of the Department of Mines and Technical Surveys at Ottawa, and to commence testing early in 1955. Underground development has been started at the Anacon-Leadridge property and the overburden is to be removed from the Austin Brook deposit which will be mined by open pit. The Company plans an initial production of 4,000 tons daily of lead, zinc and pyrite concentrates. In co-operation with the provincial government it has built a 13-mile highway connecting the Austin Brook deposit with Bathurst, and is building a branch line into the Anacon-Leadridge deposit. Power has been brought into the properties from the Nepisiguit Falls power plant.

Keymet Mines Limited had planned on bringing its lead-zinc-silver property, 15 miles north of Bathurst, into production early in 1954 but a fire destroyed the new 200-ton mill in April 1954. Construction of a second mill was started almost immediately and the Company hopes to place the mine into production by the autumn of 1954. Underground work at the property has been under way since January 1953.

Work is continuing on several other properties which were being actively explored in northeastern New Brunswick prior to the Bathurst discovery. These include the lead-zinc property of New Calumet Mines Limited at Orvan Brook, as well as a copper property of Noranda Mines Limited and a lead-zinc-silver property of the M. J. O'Brien Limited interests both in the Rocky Brook-Millstream area. Elsewhere in the Province, older properties, including manganese properties in the Bathurst area, are being re-examined.

In Nova Scotia the value of base-metal production, all of which comes from the mine of Mindamar Metals Corporation near Stirling, increased in 1953 to $3,211,000 from $2,136,000 in 1952 although the mine was in production for only eight months. Output comprised 15,148,000 lb. of zinc, 1,918,000 lb. of copper, 3,800,000 lb. of lead, 247,000 oz. t. of silver, and 3,400 oz. t. of gold. Mill output is approximately 600 tons daily.

Interest in Nova Scotia's base-metal potentialities has heightened as a result of the Bathurst discoveries in New Brunswick, and aeromagnetic and scintillation surveys have been made over much of the Province including Cape Breton Island. In Colchester County, a lead-zinc property is being developed at Smithfield and a lead property is being explored at Gay River. In Cumberland County work is being done on a copper occurrence at Cap d'Or.

Newfoundland.*—The strides made in iron-ore mining in the Province and the resultant marked increase in production attracted major attention during the review period. Output, which comes from Dominion Wabana Ore Limited, wholly owned subsidiary of Dominion Steel and Coal Corporation Limited, and the sole producer, reached a record high of 2,393,000 long tons in 1953, an increase of 916,000 long tons from 1952. The remainder of the Province's metal production, which comprises zinc, lead, copper, silver and gold, comes from the operations of Buchans Mining Company Limited near Red Indian Lake in central Newfoundland. With the exception of silver, the Company's production was considerably below 1952 levels. However, because of the marked increase in the value of iron-ore production, the total value of mineral output in the Province amounted to $33,688,000 in 1953 compared with $32,512,000 in 1952.

At Wabana, the record production achieved by Dominion Wabana Ore was the direct outcome of the extensive modernization and expansion program set under way in 1950 and completed late in 1953. Essentially all operations are submarine, extending in some parts about four miles out under the Atlantic Ocean. The program included the replacement of the cable-hauled tramcars with 22-ton diesel trucks, the interconnection of the Company's three mines, and the installation of the world's longest underground conveyor-belt system. In November 1953, a fourth mine, the Forsyth, was started with the sinking of a new 3,500-ft. slope. Approximately one-half of the output in 1953 was shipped to the United Kingdom, about 31 p.c. to the parent company at Sydney, N.S., and the remainder to Germany. Ore reserves at the Wabana mines have been estimated to be as high as 4,000,000,000 tons.

Buchans Mining Company Limited operated its 1,350-ton mill at an average rate of 950 tons a day. Production continued to come from the Lucky Strike, Oriental and Old Buchans deposits but the newer Rothermere Number One mine was the main source of ore supply. In 1953 the Company shipped concentrates containing 54,945,000 lb. of zinc, 5,525,000 lb. of copper and 35,723,000 lb. of lead compared with 61,034,000 lb. of zinc, 5,918,000 lb. of copper and 36,118,000 lb. of lead in 1952. The zinc, copper and lead concentrates also contained 654,000 oz. t. of silver in 1953 compared with 639,000 oz. t. in 1952 and 7,575 oz. t. of gold compared with 8,595 oz. t. in 1952. The Company is doing underground development work on the new orebodies located by drilling during the past few years.

Widespread exploration was carried on throughout the Island and in Labrador by various companies during the review period. Falconbridge Nickel Mines Limited continued to explore the Notre Dame Bay area where, in 1951, it located a copper property. Field parties of the Geological Survey of Canada discovered an interesting occurrence of scheelite, one of the principal ores of tungsten, in the area during the 1953 field season. Also, the Geological Survey carried out a magnetometer survey over the large area of Newfoundland between the 48th and 49th parallels, where the largest unexplored parts of the Province lie. Exploration in Labrador has revealed interesting occurrences of copper and iron.

INDUSTRIAL MINERALS

Canada's resources of industrial minerals constitute a great source of actual and potential wealth. Entering as they do into practically every phase of industrial activity, industrial minerals are indispensable in the national economy; without abundant supplies, well distributed across the nation, the great strides in industrial development made in the past two decades could not have come about.

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* Developments in the Quebec-Labrador iron-ore field on described on p. 482.

The term "industrial minerals" includes the various non-metallic minerals (exclusive of fuels) as well as rocks, sands, gravels and clays used for construction purposes.

Within the past ten years, annual production of industrial minerals in Canada has increased nearly four-fold in value from $80,235,946 to $311,063,476 (preliminary figure, 1953), whereas in the same period the value of production of metals has more than doubled to $708,912,835. It should be borne in mind that whereas the dollar value of the refined metals incorporates the cost of fluxes, reagents, and refractories used in their processing, the value of industrial minerals refers, in general, to their value in the crude or semi-processed state. Dollar value, however, tells only part of the story; in tonnage produced, the industrial minerals far outdistance metals and coal combined.

About 50 industrial minerals are produced commercially at present in Canada, and there are many more that can be produced if demand for them arises.

Canadian chrysotile *asbestos* is known for its quality the world over. Production began in 1878 in the Eastern Townships of Quebec and has been continuous ever since. This area is still the world's greatest source of asbestos and reserves are vast. It supplies 95 p.c. of the Canadian production—and Canada supplies nearly 70 p.c. of the world output. In recent years asbestos has been found in several other parts of Canada and is now being produced near Matheson, Ont., and at Cassiar, B.C. A small mill is also being built at an asbestos deposit on the west coast of Newfoundland. Canadian output of asbestos in 1953 was 911,713 tons worth $87,633,124, over 96 p.c. of which was exported. Recent years have witnessed a great program of modernization and expansion among the asbestos producers. One large new company is now planning a mill that will process 100,000 tons of asbestos annually.

Asbestos finds many uses: because of its fibrous nature it can be spun into yarn and made into cloth; mixed with cement, asbestos is used in the manufacture of shingles, pipe, flat and corrugated sheets. It is also used in brake linings, clutch facings and gaskets as well as for electrical insulation and thermal insulation. The shorter grades are used in the manufacture of asphalt floor tiles, in undercoatings for automobiles, as fillers in plastics and paints, and for many other purposes.

Barite or *heavy spar*, as it is sometimes called because of its great weight, is quarried at Walton, N.S., and at Parson and Brisco, B.C. Production in 1953 reached an all-time peak of 248,973 tons valued at $2,316,474. British Columbia barite is white and is used as a filler for paints, rubber, paper, etc., and also in oil-well drilling muds. The deposit at Walton, N.S., which supplies the greater part of the production, is thought to be the largest in the world. The only other deposit of comparable size is found in Germany. It is pink in colour and finds its principal use in heavy drilling muds. These muds must be of high specific gravity in order to overcome the pressures of gas and water in deep wells and also to provide a medium that will float drill cuttings. Most of the barite is shipped by sea for use in the region around the Gulf of Mexico and in South America. Barium chemicals made from barite find wide use in numerous industries. Barite is also used as a heavy aggregate in making the heavy concrete shields used in atomic energy plants.

Fluorspar—a beautiful glassy mineral of yellow, green, red, purple or violet colour—is obtained mainly from the Burin peninsula in Newfoundland where it occurs in veins in granite. Reserves of fluorspar in Newfoundland are among the largest in the world, and have been estimated by the Newfoundland Geological Survey as "considerably in excess of 20,000,000 tons," making the Province one of the world's major sources of this very important mineral. A small production has been obtained for many years from Madoc, Ont., and it was formerly produced at the Rock Candy mine in British Columbia. In 1953, a new occurrence of purple fluorspar was reported on the Alaska Highway at Lower Liard Crossing, B.C. The Canadian production in 1953 reached a new high of 90,078 tons valued at $2,657,104.

Fluorspar is essential to aluminum production, is used as a flux in the steel industry, and is a raw material for the manufacture of hydrofluoric acid which itself has a great variety of uses. Other uses are in the manufacture of glass, enamel, and magnesium metal.

Canada is second among the nations in production of *gypsum*, a mineral composed of hydrous calcium sulphate. It is found in every province except Prince Edward Island and Saskatchewan, and is quarried in Newfoundland, Nova Scotia, New Brunswick, Ontario, Manitoba and British Columbia. Production in 1953 amounted to 3,765,763 tons valued at $7,487,928. Nearly three-quarters of the production is exported, mainly by sea, to gypsum-manufacturing plants along the Atlantic coast of the United States as far south as Florida.

In 1953, National Gypsum (Canada) Limited prepared to open up a very large gypsum deposit near Milford, N.S. Most of the production will be exported to the United States by boat from Dartmouth, N.S. Canada's largest producer is Canadian Gypsum Company Limited which has just completed a large new gypsum manufacturing plant at Montreal, Que., to make plaster, wall board, and lath from Nova Scotia gypsum. The largest manufacturer of gypsum products is Gypsum, Lime and Alabastine, Canada, Limited which operates several plants across Canada.

Gypsum finds its principal use as a construction material in the form of wall plaster, wall board, sheathing board, lath and tile, but quantities are also used for dental plaster, moulding plaster, surgical plaster, Keene's cement, agricultural gypsum, Portland-cement retarder, pottery, plasters and mineral filler.

It is potentially important as a chemical raw material: in some countries gypsum is used, for example, as a source of sulphuric acid but this use is not, as yet, economic on this continent. Associated with the gypsum in most localities are large deposits of anhydrite, or anhydrous calcium sulphate which is not utilized to any extent.

Rocks such as limestone, granite, shale, and sandstone form a very valuable part of the industrial mineral resources of Canada. Found in all parts of the country they are the basis of many industries: building-stone, cement, lime, crushed stone, brick and tile, refractories, silica, and so on. Exact statistics are difficult to obtain but it is estimated that in 1953 more than 32,000,000 tons of rock were quarried in Canada.

Limestone is the most widely quarried and extensively used of all the rocks. In 1953 over 25,000,000 tons were quarried. Practically every known variety of limestone except chalk is available as well as several unusual types such as brucitic limestone, and magnesitic dolomite. Brucitic limestone, found in Quebec, Ontario and British Columbia, contains granules of brucite (magnesium hydroxide) scattered through the limestone matrix. It is quarried near Wakefield, Que., by the Aluminum Company of Canada Limited for the production of magnesia, quicklime, hydrated lime, and agricultural limestone. The magnesia, in turn, is used for the making of basic refractories and magnesium metal, and for various other uses, particularly in agriculture. Magnesitic dolomite is mined at Kilmar, Que., by Canadian Refractories Limited and converted into basic refractory products. In 1953, a large plant was built at Dundas, Ont., by Steetley of Canada, Limited, for the production of a refractory product known as "dead-burned dolomite" from the extensive dolomite deposits in that area. *Building stone* is produced from limestone in Ontario, Quebec and Manitoba. *Marble* is produced in Quebec, Ontario and British Columbia and is available in many of the other provinces. *Crushed stone* for road metal, concrete aggregate, railroad ballast, and numerous other uses is produced in a great many parts of Canada. *Roofing granules* are made from rhyolite, basalt, and slate in Quebec, Ontario and British Columbia.

The *Portland cement* industry, which uses limestone and cement as its main raw materials, is established in seven of the ten provinces. It has been expanding its production facilities steadily in recent years to keep pace with construction activity in Canada and at present has an installed capacity of about 23,000,000 bbl. of cement annually which places Canada well up among the nations of the world on a per capita production basis.

The *lime* industry also has been experiencing rapid growth in the past decade. Production in 1953 was 1,184,963 tons valued at $13,457,648 which is close to the all-time record. The growth of the lime industry was mainly caused by the rapidly growing chemical industry because over 80 p.c. of the lime produced now finds chemical use. Lime is made in all provinces except Nova Scotia, Prince Edward Island and Saskatchewan. Most of the production is marketed in the lump form (quicklime), but hydrated lime, which is a specially slaked dry powder, is steadily gaining in popularity.

Shales and *clays* suitable for the manufacture of brick and tile are found in all provinces and are being widely utilized by the ceramic industry. This is a rapidly growing industry and production to-day is nearly four times as great as it was ten years ago, reflecting, in part, the great activity in construction throughout Canada. Shales and clays that bloat on being heated are now being sought for the production of lightweight aggregates to supply the demand from the construction industry for lightweight building materials. Two new plants to make these products have been built recently and several others are in prospect.

A volcanic rock, known as *perlite*, that expands greatly on heating and yields a lightweight product that is incorporated into plasters and other building materials, has been found in British Columbia and has been quarried at François Lake for use in Western Canada.

The *granite*-quarrying industry is active in Quebec, British Columbia, Ontario, Nova Scotia and Manitoba. In addition to use for building and monumental stone, granite is extensively used for road metal, concrete aggregate, and railway ballast. It is also used in minor quantities for poultry grit and in the making of artificial stone.

Sand and *gravel* together constitute the greatest tonnage of any mineral substance produced in Canada. In 1952, approximately 100,000,000 tons of sand and gravel were used by the construction industry in this country. Owing to increasingly strict specifications, industry is considering the manufacture of sand from rock in order to obtain exactly the kind of sand required and considerable research is being carried on to this end.

Canada shares with Soviet Russia the distinction of being a producer of *nepheline syenite*. This is a quartz-free, white, igneous rock consisting of a mixture of soda feldspar, potash feldspar, and nepheline. It occurs in large uniform deposits in Eastern Ontario and is being worked near Lakefield, Ont., by American Nepheline Limited. The deposit there is five miles long, has an average height of 350 ft. above the surrounding country and is from one-quarter mile to one mile wide.

Nepheline syenite is produced mainly for use in the ceramic industry; it is pulverized for use as an ingredient in glass, pottery, vitrified china, floor and wall tile. When pulverized to micron size it is used as a pigment extender in paints, and as a filler in plastics, rubber, and insecticides. It is also used in scouring compounds, and as an additive in the manufacture of mineral wool. Because its high alumina content—about 23 p.c. by weight—may be easily leached out, nepheline syenite is a potential source of alumina.

Salt is one of the necessities of life and is an essential raw material for the chemical and food-processing industries. Salt is found in every province of Canada and truly may be said to be available in inexhaustible quantity. In Western Canada, for instance, it occurs in great underground beds extending for hundreds of miles from the southern part of Manitoba through Saskatchewan to the northern part of Alberta. It is produced in Ontario and Nova Scotia as well as in the Prairie Provinces. Most of the production is obtained by pumping water down holes drilled to the salt beds and then pumping the saturated brine back to the surface.

In 1953, production amounted to 946,650 tons with a value of $7,356,595. About 53 p.c. of this was used by the chemical industry, principally in the form of brine. The chief primary chemical products made from salt are caustic soda, chlorine, and soda ash, but there is a host of secondary products. The fishing industry, meat packing, textile, leather, refrigeration, metallurgical, soap, and many other industries utilize salt. The only salt produced by direct mining in Canada is at Malagash, N.S., where a relatively impure salt is obtained, which after being crushed is sold throughout eastern Canada for use on highways and railways to remove ice in winter and to control dust in summer. At present, Canadian Rock Salt Company Limited is sinking a shaft near Windsor, Ont., in preparation for the mining of the pure rock salt available in that locality at a depth of 1,100 ft.

Silica is another material indispensable to Canadian industry. It is the principal constituent of many minerals but the chief commercial sources are quartzite, sandstone, sand, and quartz from quarries in Ontario, Quebec, Nova Scotia, Manitoba, and British Columbia. The products differ in the several provinces: chief are flux for metallurgical use, silica flour, moulding sand, and material for the making of ferrosilicon, silicon metal, artificial abrasives, silica brick, and other ceramic products. Quartz crystals of excellent quality are quarried in small quantity at Lyndhurst, Ont.—at present the only producing source on this continent. The quartz is used in the making of submarine-detection equipment.

Silica is also used in the chemical industry. Some recent products, known as silicones, which are derived from silica, coke and chlorine, are acclaimed as being among the most significant chemical developments in recent years. Silicones fill the gap between organic and silicate compounds, and their chemical structure promises an endless array of them. They are available in the form of colourless liquids, oils, greases, varnishes, and resins, and as special rubber products. Silicone-treated materials will "shed water like a duck's back."

In 1953, Canada produced 1,721,218 tons of silica worth $1,799,463. Imports in the same period amounted to 703,221 tons valued at $1,928,438. The imports consisted mostly of silica sand for the glass industry. As yet, a suitable glass sand has not been produced in Canada but intensive efforts are being made to locate a suitable domestic source.

Production of *sodium sulphate* in 1953 amounted to 112,881 tons valued at $1,704,313. Not many years ago the alkali sloughs of Western Canada were looked upon as useless—even as dangerous in a cattle-producing area. Investigations in the 1920's showed them to contain well over 100,000,000 tons of solid hydrous sodium sulphate, one deposit alone containing 25,000,000 tons. To-day, four companies are producing the material which is sold for use in making kraft pulp, heavy chemicals and detergents.

Although Canada has no known deposits of native *sulphur*, such as those in the southern United States, it has vast resources of sulphur-bearing minerals from which continually increasing tonnages of elemental sulphur, sulphuric acid, and sulphur dioxide are being obtained. Sulphur and its compounds are used directly or indirectly by practically every industry; in fact, the trend of sulphuric acid sales provides a barometer of industrial activity. Adequate sources of sulphur are vital to any industrial nation but the necessary processes must be developed to make the sulphur available for industrial use. Such processes have been developed in Canada, and this country is within measurable distance of being self-sufficient in sulphur supplies. Eastern Canada and British Columbia produce very large quantities of pyrite, and other sulphide minerals—the pyrite mainly as an inexpensive by-product. For many years it has been utilized as a raw material for making sulphuric acid, for the sulphur is released when sulphide minerals are roasted or smelted, and can be recovered from the smelter gases. Recovery of both elemental sulphur and sulphuric acid from smelter gas was pioneered by the Consolidated Mining and Smelting Company Limited at Trail, B.C. At present, three metallurgical companies are recovering sulphuric acid from this source. Canadian Industries Limited operates the largest plant of its kind for the production of liquid sulphur dioxide from gas from the new oxygen flash-smelting process of International Nickel Company at Copper Cliff, Ont. The C.I.L. plant came into operation in 1953 and produces 90,000 tons annually of the liquid sulphur dioxide—equivalent to 45,000 tons of sulphur. It is used mostly by pulp mills.

Noranda Mines Limited completed a plant near Welland, Ont., late in 1954 to recover annually 18,000 tons of elemental sulphur and 36,000 tons of sulphur as sulphur dioxide from pyrite. In this process 75,000 tons of iron sinter will also be made.

On the Prairies, exceptionally pure elemental sulphur is being recovered from sour natural gas by Shell Oil Company of Canada at the rate of 11,000 tons, and by Royalite Oil Company at the rate of 10,000 tons, a year. The output is marketed with pulp mills on the West Coast. The Shell Oil plant capacity is being doubled to supply Gunnar Gold Mines' new uranium recovery plant at Beaverlodge, Sask.

In 1953, the equivalent of 358,850 tons of sulphur was produced in Canada from these various sources. This was somewhat less than imports which amounted to 359,105 tons in the same period. However, in the future it is expected that a steadily increasing proportion of sulphur will be produced from domestic sources.

In addition to the foregoing, many other industrial minerals are being produced in Canada and are making their contribution to the industrial prosperity of the nation. These include feldspar, mica, talc, soapstone, arsenic, serpentine, diatomite, and ochre. Many others such as actinolite, graphite, epsomite, flint pebbles, volcanic ash, corundum, and apatite have been produced in the past and can be produced again when the demand arises. Still others such as potash, witherite, celestite, rare-element minerals, and rare earths are known to occur in quantity and may come into production shortly, depending on the outcome of investigations now in progress. The steadily increasing demand for the industrial minerals now being produced and the development of uses for those at present lying dormant, make the prospects for increased production of these exceedingly useful materials very promising.

Petroleum and Natural Gas

Extensive recent discoveries of petroleum and natural gas have created a phenomenal expansion in the oil industry and established a vast potential in the natural-gas field. Expansion in the oil industry, however, was not confined to exploration alone, for much progress was made in 1953-54 toward extending marketing facilities by the planning and construction of new refineries to process the oil and pipelines to transport it. Progress was also made in planning for the transportation of natural gas, particularly from Alberta, and authorization was given for the construction of an all-Canadian pipeline to be built across the prairies to Winnipeg, Man., and to continue eastward north of the Great Lakes to serve Ontario and western Quebec. The building of this line will mean an expenditure of hundreds of millions of dollars on development wells to produce the gas, processing plants to purify it, gathering lines to collect it, trunk lines to transport it and distribution lines to market it in Prairie and Central Canada towns and cities. The direct and indirect benefits to Canada of such a project will be enormous and large quantities of gas from Canadian sources will become available to supplement other fuels in the industrial areas of Ontario and Quebec and to provide fuel for mining and pulp and paper industries throughout northern Ontario.

A plan to build a natural gas pipeline from Peace River, Alta., to Vancouver, B.C., with lines southward to serve the Pacific Northwest area of the United States, is also under consideration.

Exploration and Discovery.—All four western provinces shared in the oil and gas exploration activities in 1953 and new and significant discoveries were made. In Manitoba the most promising discovery was at Roselea, a few miles from the producing Virden field in the southwest part of the Province. This discovery, and those of a somewhat similar nature in other provinces, has much significance for future developments because of its stratigraphic and structural relationships. Mississippian strata occur in the Williston basin and in the mountains and foothills of Alberta but thin out to the north and east owing to erosion after deposition, and it is on the up-dip wedging out-edge of these sediments that the oil has been found. The eastern and northern limit of these sediments has been outlined in a general way by widely spaced wells. It extends across the southwest corner of Manitoba, across southern Saskatchewan and trends northwest to cross Alberta, west of Edmonton into the Peace River area west of the town of Peace River, and through northeast British Columbia to the Liard River where outcrops occur south of Fort Simpson. Thus, the eastern edge in a straight line, between various points where known, would be at least 1,200 miles long but probably greatly exceeds that length because of its sinuous outline. All this becomes, as is now being recognized, good prospective oil territory as the oil is held in the southwestward-dipping Mississippian porous strata at favourable locations near their eastern border by being sealed against overlying and overlapping younger beds.

In Saskatchewan there has been production of heavy oil from the Lloydminster and Coleville fields. Also, a considerable reserve of medium-grade oil has been established in a number of fields but particularly in the general Fosterton area. Marketing of this medium-grade oil has been difficult because it is not so desirable as light oil for refining and because it contains sulphur. Arrangements to solve this problem have not yet been put into effect and therefore when light oil was discovered in the Viking sand in the Smiley field it was hailed as of great importance to the Province. It now appears that the Smiley field will contain about 10,000 acres and, although the daily yield per well is moderate, the fact that the wells are relatively shallow and can be completed in a week has led to fast development because the oil can be marketed through the Interprovincial pipeline. This is the first light oil production from Saskatchewan and is of importance in the search for new fields of a similar type.

The Sturgeon Lake field was discovered in 1952. It lies 50 miles east of Grande Prairie in the Peace River area of Alberta and is a reef field somewhat similar to Leduc and Redwater. Further drilling in 1953 has revealed that this field may have a recoverable oil reserve of from 100 to 200 million barrels. Late in 1953, the Pembina field, 65 miles southwest of Edmonton and west of the Leduc-Bonnie Glen-Wizard Lake trend, was discovered. The oil occurs in a sand known as the Cardium in Upper Cretaceous shale of Colorado age. This sand is well known in the foothills from its occurrence in Turner Valley but previously it had not given commercial oil production although it was known to contain gas in a few places. It thins out eastward where the sand in it is replaced by shale. The sand is thus a wedge with southwest dip and in the thin up-dip edge the oil has accumulated. The productivity of individual wells in the Cardium may not be high since the permeability of the sand is rather low but the extent of the field could considerably exceed that of East Texas in the United States, an area of about 136,000 acres in which the productivity has been very large. Thus, the Pembina field may become the largest in area in North America. Its boundaries, however, are not yet known and although the expectation is that all wells drilled in 1953 are in one pool some of them are widely spaced.

In all, about 15 new fields were officially recognized in Alberta in 1953 but most of these had only a few wells in production at the end of the year.

In British Columbia, the drilling in the Peace River area has been primarily to discover gas reserves to supply the proposed pipeline to Vancouver, B.C., and the Pacific northwest area of the United States. There is, as yet, no oil production in British Columbia as a result of this drilling although encouraging shows have been found in a few wells. The gas reserves in the Peace River area are now estimated at 3,949,000,000,000 cu. feet based on 49 potentially productive wells in Alberta with a reserve of 1,775,000,000,000 cu. feet and 45 potentially productive wells in British

Columbia with a reserve of 2,174,000,000,000 cu. feet. This development, particularly in British Columbia, is very remarkable in that the first well in the Fort St. John field, where the main reserves occur, was completed late in 1951. In the past two years the increase in gas reserves in the Peace River area has been at the rate of 1,500,000,000,000 cu. feet a year, but at present there is no market except locally where the consumption is insignificant.

Demand and Markets for Canadian Crude Oil.*—The total demand for oil products in Canada in 1953 showed an increase of 10 p.c. from 1952, reaching 515,000 bbl. a day. The total production of crude oil was about one-third higher than the previous year and supplied about 43 p.c. of Canada's requirements. There was some restriction on output because of market limitations and the 1953 yield of more than 80,000,000 bbl. does not wholly reflect oil-well capacities in the various producing fields in Western Canada.

The Trans-Mountain and the Lakehead pipelines now provide a possible outlet for 600,000 bbl. of oil a day from Western Canada when the markets are developed to receive this volume. The pipeline capacity, therefore, is considerably in excess of the present demand since the yield in 1953 was 77,065,000 bbl. for Alberta, 3,000,000 bbl. for Saskatchewan, and 619,321 bbl. for Manitoba, a total of 80,684,321 bbl. or an average of over 221,000 bbl. a day. Of this amount about 120,000 bbl. a day were refined on the Prairies, leaving about 100,000 bbl. a day for the West Coast and Central Canada and for refining at Superior, Wis., U.S.A. The market for western Canadian oil on the West Coast has been restricted temporarily by imports from the Near East owing to cheap tanker rates so that for the near future the major part of the outlet will be eastward. The recent completion of Sun Oil Company's Sarnia refinery brings the refining capacity in that area to 109,500 bbl. a day and of the 29,600,000 bbl. processed there in 1953, all but 5,224,000 bbl. were Western Canadian crude. In addition, the B. A. Clarkson refinery near Toronto, Ont., processed 5,777,000 bbl. in 1953, of which 2,702,000 bbl. were from Western Canada, making a total of western Canadian crude oil processed in Ontario in 1953 of 27,527,990 bbl. including 450,000 bbl. refined at Fort William. It is expected that, in 1954, this will be increased to approximately 35,140,000 bbl. or an average of about 96,250 bbl. a day. This, exclusive of normal growth, will come close to the saturation point for the outlet of western Canadian crude in central Canada unless it is decided to enter the Montreal market which now is largely supplied from Venezuela by tanker and by pipeline from Portland, Me. The Montreal refineries processed 56,275,000 bbl. of crude oil in 1953 representing slightly more than one-third of the oil refined in Canada. The abundance of oil in world markets at present makes the Montreal market highly competitive for western Canadian oil and it is doubtful whether oil could be supplied from this source without a considerable cut in price. Thus, the crude oil situation in Canada has changed in a few years from one in which very little oil was available from domestic production to one in which the supply now warrants a continual search for new markets. Presumably, in this respect, much will depend on the construction of new refinery facilities along and adjoining the Lakehead pipeline between Superior, Wis., and Sarnia, Ont. In this area the United States market would seem to offer good prospects but there is a duty of 10·5 cents a barrel on light crude oil entering the United States.

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* Information on the construction of oil and gas pipelines is given in the Transportation Chapter of this volume.

COAL

In a continuing struggle to maintain markets, the Canadian coal industry lost further ground to oil and natural gas during the review period. Nevertheless, the industry made every effort to secure or improve its position through the increased use of strip mining and of mechanization and by means of research and investigations into more economical mining of better-quality coals. In this effort it was assisted by the Mines Branch, Department of Mines and Technical Surveys, Ottawa, and by other research organizations.

Coal output in 1953 amounted to 15,900,000 tons valued at $102,720,000, a decrease of 10 p.c. in volume and 8 p.c. in value from 1952. The decline was greatest in Alberta, the largest producer, where it amounted to 18 p.c., followed by British Columbia with a 12-p.c. decrease.

Because of the substitution of fuel, diesel oil and natural gas for coal for domestic and building heating, for railway use and for power production, Canadian consumption of coal declined 7·8 p.c. in 1953 to 38,141,000 tons. The decrease was almost evenly divided between domestic and imported coal. An idea of the rapid growth in the changeover from coal to oil in domestic and building heating during the past decade may be gained from the fact that, during the 1941-45 period, the oil consumed, estimated as the heat equivalent in terms of coal, amounted to almost 6 p.c. of the total fuel used. By 1953, this had spiralled to 45 p.c. of the total fuel used.

One of the heaviest losses encountered by the coal industry has been that of the shrinking railway market because of the railway conversion from coal to oil-burning and to diesel locomotives. During 1953, the Canadian National Railways, as part of its five-year conversion program to be completed in 1956, converted 99 coal-burning steam locomotives to oil, mainly in Western Canada, which alone means a loss of approximately 297,000 tons of coal yearly. Moreover, Canadian railways added a further 206 diesel units to their rolling-stock during 1953, bringing the total number of diesels in use at the end of the year to 969. In the production of thermal power, coal vies strongly with oil and natural gas. This type of power is coming into increasing use particularly in the Prairie Provinces where the economical supply of hydro-generated power has about reached its peak. The construction of one and possibly two large thermal plants is planned for the near future in Alberta, both near large reserves of coal.

Coal production by strip mining, a lower-cost method carried out in all provinces except Nova Scotia, increased 7·3 p.c. to 6,195,059 tons in 1953. In Saskatchewan, 99·7 p.c. of the output was strip mined, in Alberta almost 43 p.c., in New Brunswick about 73 p.c., and in British Columbia, 19 p.c. The average output per man-day in strip mining was estimated at 11·4 tons compared with 2·6 tons for underground.

The most outstanding development in mechanization in recent years is the 'Dosco Miner' developed in the mines of Dominion Steel and Coal Corporation Limited in Nova Scotia. The machine, which is rapidly coming into general use in eastern collieries, is capable of cutting coal from the longwall face without the aid of explosives and of loading it onto conveyors at the rate of 500 tons of coal per eight-hour shift.

During the review period, considerable research into the complex phenomena relating to rock pressures in mines, with special reference to the violent occurrence of "bumps" and "outbursts", continued to be carried out in Western Canada and in the Maritimes by the Department of Mines and Technical Surveys.

The industry's efforts to improve the quality of its products have been concentrated on the application of modern methods of beneficiation such as cleaning, drying and the briquetting of fines. During the review period the manufacture of briquettes increased in Western Canada particularly in the Mountain Park, Cascade and Crowsnest areas of Alberta, where briquettes suitable for locomotive use are prepared from coal fines. The production of these briquettes has aided materially in retaining some of the railway market. In 1953 the railways absorbed, for locomotive use, over 81 p.c. of the 708,493 tons of briquettes produced in Canada that year. A new plant for the manufacture of these briquettes was put into operation in the East Kootenay area of British Columbia.

Interest also increased in the possible production of briquettes for use in both domestic and industrial stokers, and an investigation into these possibilities was started at the Mines Branch, Department of Mines and Technical Surveys.

Nova Scotia and New Brunswick.—Nova Scotia produces high and medium volatile bituminous coking coals in the Sydney, Cumberland and Pictou areas and some non-coking bituminous from the Inverness area. Production in 1953 amounted to 5,787,000 tons compared with 5,905,000 tons in 1952, and accounted for 77 p.c. of the total value of the Province's mineral output in 1953. Most of the major operations are completely mechanized. However, as much of the production comes from submarine workings, operators are faced with the problem of increasingly high transportation costs. To overcome this and to increase output, Dominion Steel and Coal Corporation Limited, the largest operator, is building a 6,225-foot inclined tunnel into its workings at Glace Bay. The tunnel will be equipped with a belt-conveyor system to bring the coal to the surface with a single-track road for use in transporting men and material to and from the surface by rope haulage.

The Geological Survey of Canada continued to carry out coal research investigations at its Sydney office with a view to assisting development and prolonging the productive life of the Sydney coalfield. The office is operated in co-operation with the Nova Scotia Department of Mines and the Nova Scotia Research Foundation.

Output in New Brunswick is a high volatile bituminous coal from the Minto area. In 1953, it amounted to 721,000 tons compared with 743,000 tons in 1952.

Most of the coal produced in the Maritimes is used locally for industrial and domestic purposes; the remainder is shipped to Ontario and Quebec.

Saskatchewan.—Saskatchewan produces only lignite coal, chiefly from the Bienfait division of the Souris area, the main producing fields being the Estevan and Roche Percee divisions. Production in 1953 totalled 2,000,000 tons, a decline of 62,000 tons from 1952. Approximately 65 p.c. of the output was shipped to Manitoba for domestic and industrial use.

Alberta.—Alberta produces almost all types of coal including a small tonnage of semi-anthracite. Production in 1953 dropped to 5,917,000 tons from 7,195,000 tons in 1952. About 59 p.c. of the output was bituminous and the remainder mainly subbituminous and lignite. Coking bituminous coal ranging from high to low volatile is produced in the Crowsnest, Nordegg and Mountain Park areas. Another large bituminous mine in the Mountain Park area was closed leaving the area with only one operating property. This mine and the one remaining operating mine in the Nordegg area are almost entirely dependent upon the continued use of coal by the railways. Lower-rank bituminous non-coking coals are produced in the Lethbridge, Coalspur, Saunders and several other areas of the foothills. The coal in the Drumheller, Edmonton, Brooks, Camrose, Castor and Carbon areas is classed as subbituminous and that in the Tofield, Redcliff and several other areas is on the border of subbituminous and lignite. The Cascade area was the only field that produced semi-anthracite in 1953.

British Columbia.—Bituminous coking coal ranging from high to low volatile is mined on Vancouver Island and in the East Kootenay, Telkwa and Nicola areas. Small quantities of subbituminous coal have been produced mainly in the Princeton field. In the Kootenay (Crowsnest) area, the largest producing field, medium-temperature oven (by-product) coke is manufactured for industrial consumption.

Section 2.—Government Aid to the Mineral Industry*

Subsection 1.—Federal Government Aid

The Department of Mines and Technical Surveys.—The Federal Department of Mines and Technical Surveys came into being on Jan. 20, 1950, in the reorganization of the former Department of Mines and Resources. The Department has five branches—Surveys and Mapping Branch, Geological Survey of Canada, Mines Branch, Dominion Observatories, and Geographical Branch. The Department's functions include the administration of the Emergency Gold Mining Assistance Act and of the Explosives Act.

Surveys and Mapping Branch.—The Branch provides the base maps required for use in the development of Canada's natural resources, produces and distributes all Canadian aids to navigation, is responsible for legal surveys of federal lands, and provides a national system of levelling and precision surveys for use as geodetic control by federal, provincial and private agencies.

The Geodetic Survey provides the original surveys that form the framework or basic control for mapping throughout Canada and for engineering and surveying projects related to natural resources development. Survey stations are established at fairly regular intervals across Canada and are marked by permanent monuments whose latitudes, longitudes and elevations above mean sea-level are determined with a high degree of accuracy. The determination of geographical position by astronomical observations for mapping purposes in northern areas is being superseded by Shoran trilateration in which the adaptation of radar is meeting with success.

The Topographical Survey provides topographical maps that show all significant natural and artificial features fundamental to the study and economic development of mineral and other natural resources. The Topographical Mapping Section is responsible for the field surveys that provide ground control for mapping from aerial photographs, and the Air Survey Section plots and produces maps from these aerial photographs. The National Air Photographic Library indexes, preserves and distributes prints for all aerial photography done by or for the Federal Government. The Topographical Survey administers the Canadian Board on Geographical Names.

The Legal Surveys and Aeronautical Charts Division makes and records legal surveys of federal Crown lands in the Yukon and Northwest Territories, the National Parks and Indian lands and reserves. This Division prepares and distributes aeronautical charts (for which the preparation of base maps involves planimetry derived from tri-camera aerial photography and altimetry derived from radar measurements), flight manuals and electoral maps.

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* Revised under the direction of Marc Boyer, Deputy Minister, in the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.

The Canadian Hydrographic Service is responsible for the charting of the coastal and inland navigable waters of Canada, the analyses of tides and tidal current phenomena and the investigation of water-surface elevations of the St. Lawrence-Great Lakes waterway. The resultant data are published in the form of official navigation charts, volumes of Sailing Directions, Tide Tables and Water Level Bulletins.

The Map Compilation and Reproduction Division prepares, draughts and reproduces maps, charts and plans for lithographic printing in multi-colour. The work includes the preparation and photo-reproduction of air-chart bases, the reproduction and printing of air information for aeronautical charts, the preparation and printing of topographical maps, and the reproduction and printing of hydrographic charts.

The Branch had 17 geodetic, 33 topographic and 20 legal survey parties in the field in 1953. Nine ships and six motor launches were engaged in charting operations.

Geological Survey of Canada.—The primary function of the Geological Survey is to obtain information on the geology of Canada that will be of assistance in the search for and development of mineral deposits. The results of its activities also provide a basis for the appraisal and conservation of Canada's mineral resources generally, including water supplies, for soil surveys and for the solution of geological problems that frequently arise in construction projects. Reports issued by the Geological Survey include: memoirs with fairly complete descriptive accounts of the geology of particular areas and accompanied, as a rule, by geological maps; bulletins dealing with problems rather than areas; papers issued as soon as possible after the close of the field season, treating separately of each area and summarizing the information acquired; and the Economic Geology Series reports, dealing in a comprehensive way with mineral deposits of a particular type. Coloured geological maps are issued on various scales from one inch equalling a few hundred feet to one inch equalling eight or more miles, the common standard scales being one inch to one mile and one inch to four miles. Preliminary maps showing the geology in pattern are issued shortly after the field season ends for those areas where the search for metals or minerals is active.

In 1953, the Geological Survey had 79 parties in the field, one more than in 1952. The work undertaken included an aerial reconnaissance by conventional aircraft in northern Ungava covering the northern continuation of the Quebec-Labrador iron belt, and the investigation of a folded belt of metamorphic rocks in northern Ellesmere Island, less than 500 miles from the North Pole.

The Regional Geology Division carries out geological surveys of the bedrock formations and associated ores and economic materials of Canada by means of annual programs of systematic investigations and geological mapping, mainly of areas that have been mapped topographically. It conducts airborne magnetometer surveys as an aid to regional geological mapping and prospecting.

The Palæontology Division carries out palæontological and stratigraphical investigations and studies that are of great importance in geological mapping, interpretation of structures, and exploration for natural fuels and minerals.

The Mineralogy Division prepares and distributes mineral and rock collections for use by prospectors and educational institutions, organizes and maintains a systematic collection of minerals for reference and exchange, and identifies mineral specimens sent in by the public.

The Radioactive Resources Division is concerned with the field and laboratory investigation of Canadian resources of radioactive raw materials and maintains free testing and advisory services for uranium prospectors. As agent of the Atomic Energy Control Board, the Division receives the results of analyses for uranium and thorium and reports on the development of radioactive mineral deposits. This information is incorporated in a confidential inventory.

The Pleistocene and Engineering Geology Division makes studies of the unconsolidated materials that mantle the bedrock throughout the greater part of Canada. The geological study of these materials is a prerequisite for many types of engineering and agricultural projects.

The Fuels Resources Division is engaged in the technical study and interpretation of rock cuttings from wells drilled for oil and natural gas with a view to directing exploration for these minerals to localities offering the greatest promise of production. The Division also investigates the geology of coal deposits as a basis for estimating Canada's coal reserves and conducts research into the microscopic character of individual seams.

The Geological Cartography Division prepares cartographical representations for the reproduction of preliminary and standard geological maps, compiles and edits geological and related maps, prepares drawings for maps in the Airborne Magnetic series, and provides drawings, tracings, diagrams, designs, etc., as required.

The technical editing of all reports and map manuscripts published by the Geological Survey is conducted by the Geological Manuscripts Division, which also prepares quarterly and annual reports on the progress of field and office projects, supervises papers prepared for publication and supervises and assists in the preparation of geological map compilations.

Mines Branch.—The Branch is concerned in the main with the technological problems of the mineral industry and maintains well-equipped ore-testing, mineral-dressing, fuel-research, ceramic, radioactivity and industrial minerals laboratories.

The Mineral Dressing and Process Metallurgy Division serves Canada's mineral industry through tests, investigations and research on all types of Canadian ores. The main purposes of these activities are to devise economic and efficient methods of processing ores—a service of special benefit to new mining ventures and particularly to those developing low-grade or complex deposits—and to assist mine operators in solving problems encountered in mill practice. Much of the Division's recent research has been on the extraction of gold from complex ores and on the processing of titanium ores. As a service to industry and to assist the Department of National Defence, extensive investigations have been conducted on the corrosion of metals.

The Radioactivity Division is concerned with investigations of radioactive ores, particularly with the development and application of methods whereby marketable concentrates may be produced from individual uranium ores. The primary purposes of the Division's technical services and laboratory facilities are to help bring new properties into production by determining methods suitable for treatment of particular ores and to encourage the search for uranium deposits. Extensive experimental and development work is conducted on the treatment of ores and products from the properties of Eldorado Mining and Refining Limited, a Crown company.

The work of the Industrial Minerals Division consists of tests, research and investigative work on industrial minerals, including water used for industrial purposes. The Division makes field studies of deposits, examines industrial processes utilizing them and conducts research into methods of beneficiating minerals from deposits of marginal and submarginal quality to bring them to the standards demanded by modern industry.

The Fuels Division studies the type, quality and uses of all fuels. It makes studies of production methods, largely for the purpose of devising cheaper and more efficient methods of mining, preparing, processing and utilizing coals. Work in the field or laboratories includes: the investigation of methods of mining, particularly of rock pressures in relation to the economical mining of coal at depth, and of coal preparation such as the cleaning and utilization of the low-grade finer sizes of bituminous coal which predominate in Canadian mining operations; the development of a coal-fired gas-turbine; investigations into the making of coke for foundry and other metallurgical uses, and into the increased use of Canadian coal in domestic stokers; high-pressure hydrogenation tests on coal for the production of synthetic liquid fuel, and hydrogenation as applied to the refining of oil from the bituminous sands of Alberta; and analyses of crude oils and natural-gas products.

The Physical Metallurgy Division aids the metal industries through the development of new alloys, new manufacturing techniques and new applications, and in activities aimed toward improving present practices in metal fabrication. It serves the Department of National Defence by extensive research and investigative work concerned broadly with the development of defence materials and prototype equipment and with the metallurgical problems of that Department. The Division also handles the metallurgical problems of the atomic energy project at Chalk River, Ont.

The Mineral Resources Division provides a mineral information service that is freely used by government departments, mining and allied industries, and others interested in mining or its significance in the Canadian economy. A mineral resources index inventory is maintained of all known occurrences and of mines, both active and potential, special attention being given to those minerals in which Canada is deficient. The Division makes economic studies of different phases of the mining industry. It gives technical advice as required for the administration of the Emergency Gold Mining Assistance Act and prepares reports, on request, to aid in the administration of such matters as: tax exemptions on new mining properties; tax deductions as an encouragement to prospecting for base metals, other minerals and petroleum; and tax allowances for the drilling of deep-test wells for oil in unproven fields.

Dominion Observatories.—The two main units of the Dominion Observatories are the Dominion Observatory at Ottawa, Ont., and the Dominion Astrophysical Observatory at Victoria, B.C. Permanent magnetic observatories are maintained at Agincourt, Ont., Meanook, Alta., and at Resolute Bay and Baker Lake, N.W.T. Seismic stations for recording earthquakes are operated at Victoria, Horseshoe Bay and Alberni, B.C.; Ottawa and Kirkland Lake, Ont.; Seven Falls and Shawinigan Falls, Que.; Halifax, N.S.; Saskatoon, Sask.; and Resolute Bay, N.W.T.

The Dominion Observatory, Ottawa, Ont., is responsible for the time service of Canada, which involves nightly astronomical observations of star positions and radio-broadcast services for distributing accurate time to all parts of Canada. Other astronomical activities centred at Ottawa include upper atmospheric studies by means of meteor observations, studies of the sun and its effect on earthly conditions, and mathematical studies of the atmospheres of the sun and stars. The geophysical work, also administered from Ottawa, includes the magnetic survey of Canada, with emphasis on aids to air and sea navigation, as well as field and observatory work of interest to the geophysical prospector. The methods of seismology are employed to study important aspects of the earth's crust in Canada and to assist in world-wide investigations of the earth's interior. Gravity observations are carried on throughout Canada with a generally similar purpose, special attention being paid to methods of locating mineral deposits.

The Dominion Astrophysical Observatory, Victoria, B.C., is devoted to fundamental research into the physical characteristics of the sun, stars, planets and the material of interstellar space. Its 73-inch reflecting telescope is one of the largest in the world and through its use many important contributions have been made to astronomical knowledge.

The Geographical Branch.—The function of the Branch is to organize and make available all the geographical data on Canada and on foreign countries that might be of use in promoting the economic, commercial and social welfare of Canada. The work is of two kinds—the compilation of geographical material of national significance, and geographical surveys in the field. The chief project at present is the compilation of an Atlas of Canada in co-operation with various Departments of the Federal Government.

The Dominion Coal Board.*—The Dominion Coal Board was established by the Dominion Coal Board Act (R.S.C. 1952, c. 86) which was proclaimed on Oct. 21, 1947. By this Act, the Board was constituted a department of Government to advise on all matters relating to the production, importation, distribution and use of coal in Canada. The Board is also charged with the responsibility of advising upon and administering transportation subventions.

Ancillary to these principal duties, the Board is empowered to undertake research and investigations with respect to:—

(1) the systems and methods of mining coal;
(2) the problems and techniques of marketing and distributing coal;
(3) the physical and chemical characteristics of coal produced in Canada with a view to developing new uses therefor;
(4) the position of coal in relation to other forms of fuel or energy available for use in Canada;
(5) the cost of production and distribution of coal and the accounting methods adopted or used by persons dealing in coal;
(6) the co-ordination of the activities of Government Departments relating to coal;
(7) such other matters as the Minister may request or as the Board may deem necessary for carrying out any of the provisions or purposes of the Act.

In addition, the Dominion Coal Board Act provides authority in the event of a national fuel emergency to ensure that adequate supplies of fuel are made available to meet Canadian requirements.

At the outset, the Board was concerned with the readjustment of the Canadian coal-mining industry to peacetime conditions and the implementation of the recommendations of the Royal Commission on Coal (1946). On the Board's initiative, the system of transportation subventions, designed to equalize the competitive position of Canadian and imported coals in Central Canada markets, was reorganized and extended. As a result of the revised Government assistance, production reached record heights and the movement of Canadian coals to the Ontario and Quebec markets from Eastern and Western Canada increased greatly. Employment also increased as did average production per man-day.

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* Prepared under the direction of W. E. Uren, O.B.E., Chairman of the Dominion Coal Board.

However, starting in 1952, new economic and technological developments began to have an adverse effect on the situation. It became evident that the Canadian coal industry was being faced with problems that could not have been foreseen by the Royal Commission. The greatly expanded development of oil and natural gas in the western provinces has resulted in growing inroads by these fuels into the markets for locally produced coal. With the extension of pipelines and a plentiful supply of cheap imported residual oils, the impact of competing sources of energy on coal markets throughout Canada has been increasingly felt. Dieselization of the railways and conversion of coal-burning locomotives to oil has drastically cut, and threatens to virtually eliminate in the not too distant future, one of the main traditional outlets for Canadian coal. The situation has been worsened by other factors including increased transportation costs on the movement of Canadian coals and a widening price spread at the pithead in favour of the imported products.

As a result of these conditions, which have been aggravated by a succession of mild winters, the Canadian coal-mining industry reached a critical stage during the year ended Mar. 31, 1954, despite the fact that in that year $9,861,240 was paid in transportation subventions as compared with $5,949,005 in 1952-53. The Board, in its studies and recommendations, has kept pace with developments and the Government, fully cognizant of the situation, is currently seeking as sound a solution as possible to the difficulties confronting the coal industry. The Board's recommendations as to a Canadian coal-production policy have been under study by an *ad hoc* Committee on coal subvention policy, composed of deputy ministers of the Departments concerned, preliminary to Government decision.

As agent of the Minister of Mines and Technical Surveys, the Board continued to handle applications for loans under the Maritime Coal Production Assistance Act (R.S.C. 1952, c. 179) and to administer the loans granted thereunder. The Board also continued to administer payments under the Canadian Coal Equality Act (R.S.C. 1952, c. 34) which provides a subsidy on Canadian coal used in the manufacture of coke for metallurgical purposes. During the year ended Mar. 31, 1954, 752,752 tons were bonused at a cost of $372,612.

The Dominion Coal Board maintains a continuous review of Canada's energy requirements. Because of the growing impact of oil and natural gas on the markets for Canadian coal, study has been intensified on the relation of the competing sources of energy and of possible new outlets for the solid fuel. An Interdepartmental Committee on Energy, composed of representatives from the Board and Departments and agencies of the Government concerned, has recently been established to centralize all information concerning sources of energy and to investigate their relation to the national economy. Furthermore, a power survey of the Maritime Provinces is under way which, it is hoped, will disclose means whereby the price of power may be reduced with a consequent greater demand for coal, and the basic conditions defined under which an increasing development of coal-burning plants may be planned and put into operation.

The Board, since its inception, has worked toward the co-ordination of the activities of various Government Departments and other bodies relating to coal. On the matter of technical research as related to the marketing and distributing of coal, the Board has maintained close liaison with the Division of Fuels of the Department of Mines and Technical Surveys. Under the auspices of the Board, Dominion-provincial conferences on coal research have been held annually since 1949 for the purpose of co-ordination and exchange of ideas.

At the instance of the Board, an Interdepartmental Committee on the Supply to the Armed Forces of Fuel and Equipment for Heating was set up in 1949 to advise on the purchase and supply of fuel to the Armed Services. In addition, close contact has been maintained with the purchasing agents of those Government Departments using coal whom it has advised on questions connected with the buying of coal.

In a wider sphere, the Board has met on occasion with the Coal Policy Committee of the Provincial Ministers of Mines and has given consideration to recommendations made by the latter body relating to coal. It has also kept contact with trade and other associations concerned with the various phases of the Canadian coal industry in order to foster better mutual understanding of governmental and private endeavour. It has generally constituted a central agency through which representations could be made to the Government.

Pursuant to the recommendations of the Royal Commission, the Board has continued to work for a reduction of customs duties and sales tax on coal-mining machinery. It has also maintained its efforts to create a uniform system of coal-mine cost-accounting.

The Dominion Coal Board consists of seven members including the Chairman who is its Chief Executive Officer with the status of a deputy minister. The Board is responsible to, and subject to the direction of, the Minister of Mines and Technical Surveys.

Subsection 2.—Provincial Government Aid*

Nova Scotia.—Under the provisions of the Mines Act (S.N.S. 1950, c. 3), the Government of Nova Scotia may assist a mining company or operator in the sinking of shafts, slopes, deeps and winzes and the driving of adits, tunnels, crosscuts, raises and levels. This assistance may take the form of work performed under contract, the payment of bills for materials and labour, or the guarantee of bank loans. Any such work must be approved by the Department of Mines. The Government is also authorized to assist the mining industry to procure power on the most economical basis, and may guarantee the Nova Scotia Power Commission against any loss incurred on account of capital investments made for that purpose or revenue. Mining machinery and equipment that may be used in searching for, testing and mining minerals may be made available through the Government. Such equipment is under the direct supervision of the Chief Mining Engineer.

The Government of Nova Scotia is also empowered to make any regulations considered necessary for increasing the output of coal. Such regulations cover the appropriation, on payment, of unworked coal lands, operation of coal mines, loans or guarantees for loans. Close co-operation is maintained with the Federal Government in carrying out federal regulations made to secure increased production and economical distribution of coal from the mines of the Province.

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* Compiled from material supplied by the provincial governments.

New Brunswick.—There are five divisions under the Mines Branch of the Department of Lands and Mines. The *Mineral Lands Division* administers the disposition of Crown mineral rights including the issuing of prospecting licences, recording of mining claims, issuing of mining licences and leases, and other matters pertaining thereto. Detailed and index claim maps are prepared for distribution. The *Mine Inspection and Engineering Division* administers the safety regulations governing operations under the Mining Act. Regular inspections of all mines are performed. Laboratory facilities are maintained. It is the responsibility of this Division to approve equipment used in mines. The *Geological Division* carries on general and detailed geological mapping and investigation. Maps and reports are prepared for distribution. Mineral and rock specimens are examined for prospectors. Preliminary examinations of mineral prospects are performed where requested and circumstances warrant. The *Mine Assessment Division* is responsible for collection of mining tax and royalties and the preparation of statistics concerning mineral production are prepared. The *Bathurst Office Division* serves as recording office for northeastern New Brunswick. In addition, claim maps as well as topographical, geological and aeromagnetic maps are available for inspection and distribution. The staff is prepared to provide information concerning the Mining Act and the use of various types of maps.

Quebec.—The Mining Act (R.S.Q. 1941, c. 196) authorizes the Quebec Department of Mines to build, maintain and improve roads needed for mining development. Such work is done by contract under the supervision of departmental engineers. The Act gives the Department considerable latitude in this respect. Certain major roads have been built to new mining districts and completely paid for; on the other hand, if a particular property requires a branch road from an established highway, the owner may be required to contribute a portion of the cost. To prevent the development of uncontrolled settlements in the vicinity of operating mines, the Department regulates the use of land and permits the establishment of well-organized communities. The municipal organization of such communities is jointly administered by the Department of Mines and the Department of Municipal Affairs.

The Department maintains well-equipped laboratories for the benefit of prospectors, geologists, engineers and mine operators. The facilities include equipment for mineralogy, petrography, ore-dressing, and analysis by wet or dry assays, spectrography or X-ray. Qualitative and mineralogical determinations are made free, but quantitative analyses are made for a fee according to a tariff schedule. The Mining Act provides free coupons to be used by prospectors in paying for such analyses.

At Val d'Or in western Quebec, the Department maintains a sampling and treatment plant where tests may be made on bulk samples and where precious metals may be recovered for prospectors at cost price. The treatment plant, which is fully equipped to carry out a wide variety of pilot-scale ore-dressing tests, is at the disposal of mine owners who wish to establish mill-flow sheets. At Thetford Mines, in the heart of the asbestos district, the Department maintains a laboratory where classification of asbestos is made according to standard designations or grades. The Province has authorized the establishment of research laboratories to assist mining and metallurgical enterprises in the processes and techniques of extracting, transforming and utilizing ores.

The Department undertakes geological mapping and inspection. The work is divided between two branches, one responsible for reconnaissance (aerial) mapping, the other doing detailed mapping in mining districts and inspection of individual deposits or properties. Field parties are headed by geologists or mining engineers. The published reports on these investigations are distributed free upon request. During the field season, about 30 parties are maintained in different sections of the Province. In mining districts, offices in charge of resident geologists are maintained to collect, preserve and compile geological information disclosed by mining explorations and individual sheets of the compilation are made available to the public.

The Department employs inspectors whose duties are almost exclusively concerned with the safety of workmen in operating mines. Two Mobile Mine Rescue Stations are also operated and a mine rescue training program conducted.

In the field of education for prospectors, five-week courses at university level are organized each year at Laval and Montreal Universities. University scholarships are granted each year to deserving undergraduates and post-graduate students in mining, geology and metallurgy, thus contributing to the training of qualified engineers for the benefit of the mining industry. Lectures are given to prospectors at different localities throughout the Province.

Ontario.—The Ontario Department of Mines renders a multiplicity of services of direct assistance to the mining industry within the Province, as briefly enumerated below.

Mining Lands Branch.—This Branch handles all matters dealing with the recording of mining claims, assessment work, etc., and the final issuance of title to mining lands. As a service to the mining public, individual township maps are prepared and kept up to date showing lands open for staking and recorded and patented claims therein. As new surveys are made or later data become available, maps are revised in keeping with such information. District Mining Recorders maintain offices at strategic locations throughout the Province.

Geological Branch.—A continuing program of geological mapping and investigation is carried out by the geological staff of the Department. Detailed reports and geological maps of the areas studied are made available to the public. In many of the active areas of the Province, resident geologists are engaged to gather, and make available to the public, information concerning geological conditions, exploration and development within their respective districts. One geologist specializing in industrial minerals is maintained on the staff to examine deposits of this order to investigate methods of treatment and recovery of such minerals, and to compile data on the uses, specifications and markets for such products. Collection and dissemination of information on ground water resources is also a function of the Geological Branch. During the winter months, courses of instruction for prospectors are held in various centres throughout the Province.

Laboratories Branch.—The Provincial Assay Office, located in the East Block of the Parliament Buildings, Toronto, carries out wet analyses and assays of metal and rock constituents on a custom fee basis and also renders the same service free of charge to holders of valid assay coupons issued for the performance of assessment work on mining claims. The Timiskaming Testing Laboratories situated at Cobalt, in addition to performing fire assays and chemical analyses, conducts a bulk sampling plant mainly to assist the producers of the area in the marketing of the cobalt-silver ores. A Cable Testing Laboratory, wherein all hoisting ropes in use at the mines are periodically tested, is operated under the supervision of the Inspection Branch.

Inspection Branch.—The main function of this Branch is the regular examination of all operating mines, quarries, sand and gravel pits and certain metallurgical works with a view to ensuring proper conditions of health and safety to the men employed. District offices to serve the local areas are maintained in the major mining centres of the Province. Mine rescue stations in the principal mining sections are operated under the supervision of the Inspection Branch.

Exhibitions.—The Department each year presents displays pertaining to mining within the Province at such exhibitions as the Central Canada at Ottawa, the Canadian National at Toronto, and at other centres from time to time.

Publications Branch.—All maps and reports of the Department are distributed through the agency of the Publications Branch located at the main office of the Department.

Library.—A mining library for the use of the Department and the public is maintained within the Department. This library is comprised mainly of publications and maps of the Federal and Provincial Governments of Canada as well as of numerous periodicals and bulletins from the United States.

Mining Roads.—The most recent service of the Department is the provision of mining roads. In general, two classes of road-building are envisioned under this program. The first class of road contemplated is a mining access road, financed solely by the Department, for the purpose of opening up favourable areas for exploration; the second class of road, undertaken jointly by the Department and local mining operators, is intended to assist in the provision of required service roads to such operators.

Manitoba.—The Mines Branch of the Manitoba Department of Mines and Natural Resources offers four main services of assistance to the mining industry: (1) maintenance, by the Mining Recorder's office at Winnipeg and The Pas, of all records essential to the granting and retention of titles to every mineral location in Manitoba; (2) compilation, by the geological staff of the Branch, of information pertinent to mineral occurrences of interest both in the past and the present and expansion of this information by a continuing program of geological mapping; (3) enforcement of mine safety regulations and, by collaboration with industry, introduction of new practices, such as those concerned with mine ventilation and the training of mine rescue crews, which contribute to the health and welfare of mine workers; and (4) maintenance of a chemical and assay laboratory to assist the prospector and the professional man in the classification of rocks and minerals and the evaluation of mineral occurrences.

Saskatchewan.—The assistance given to the mining industry by the Saskatchewan Government consists of: (1) the maintenance of a geology department, under a principal geologist; (2) resident geologists stationed in or near the principal mining areas; (3) geological survey parties and reports; (4) prospectors' school; (5) prospectors' assistance plan; and (6) native trainees plan.

The Geology Department has its headquarters at Regina. The principal geologist and staff are available at all times to give information and other help to interested parties.

A resident geologist is stationed at Uranium so as to give all possible assistance to prospectors in this area. During the summer months, geological survey parties study and map attractive areas and prepare reports which are made available to anyone interested. The prospectors' school gives basic training in geology, mineralogy and prospecting and exploration techniques to future prospectors. Prospecting has become a skilled and specialized trade and instruction in this field will help young men to get a start in a profession very vital to the mining industry of Canada. The prospectors' assistance plan, which is intended to encourage prospecting, assists bona fide prospectors by way of equipment and transportation and provides technical advice regarding geologically favourable areas.

The native trainees plan has a twofold purpose: (1) to train the Indians and Métis in the northern part of the Province to recognize the common minerals so that, as they go about their usual work, they will be aware of mineral indications that may be of value; (2) to train them to a point where they may be used as prospectors for the exploration companies and, by so doing, extend their means of livelihood beyond the hunting and trapping field.

Alberta.—Alberta Government assistance to the mining industry is diversified in character. The Mines Division of the Department of Mines and Minerals regulates coal mines and quarries and maintains standards of safety by inspection and certification of workers. The Workmen's Compensation Board also maintains safety standards and trains mine-rescue crews. The oil and gas industries are served in a similar way by the Petroleum and Natural Gas Conservation Board. Its regulatory measures, however, are also concerned with the prevention of waste of oil and gas resources and with giving each owner of oil and gas rights the opportunity of obtaining a fair share of production. This Board compiles periodic reports and annual records which are of invaluable assistance in oil development in Alberta. The mining industry is also served by the Research Council of Alberta which has made geological surveys of most of the Province and has carried forward projects concerned with the uses and development of minerals. The Council has studied the occurrence, uses and analysis of Alberta coals and their particular chemical and physical properties, the use of coals in the generation of power, the up-grading and the cleaning of coal and has also studied briquetting, blending, abrasion loss, shatter and crushing strength, asphalt binders and dust-proofing of coal. Studies have been made of glass sands, salt, fertilizers, cement manufacture and brick and tile manufacture.

The Province from time to time has had Commissions examine various aspects of the mining industry when it was considered that their findings would be of assistance in developing such industries. The Province, together with the Canadian Association of Oil Well Drilling Contractors and the Western Canada Petroleum Association, maintains a detailed supervisory and safety training program concerned with the drilling of oil and gas wells. Of assistance also to mining companies and oil companies are the special deductions provided for in the Alberta Corporation Income Tax Act. These follow the parallel provisions in the Federal Income Tax Act.

British Columbia.—The Department of Mines of British Columbia provides the following services: (1) detailed geological mapping as a supplement to the work of the Geological Survey of Canada; (2) free assaying and analytical work for prospectors registered with the Department; (3) assistance in the field to the prospector by departmental engineers and geologists; (4) grubstakes, limited to a maximum of $500, for prospectors; (5) assistance in the construction of mining roads and trails; and (6) inspection of mines to ensure safe operating conditions.

Section 3.—Mining Legislation

Federal Mining Laws and Regulations.*—The Federal Government administers the mineral lands of the Yukon Territory and the Northwest Territories as well as those within Indian reserves and in National Parks.

Mining Acts and Regulations covering the Yukon and Northwest Territories are administered by the Lands Division, Northern Administration and Lands Branch, Department of Northern Affairs and National Resources. Grants issued for federal lands (the property of the Federal Government) in these regions reserve to the Crown the mines and minerals underlying such lands.

Mining rights on vacant and certain other federal lands may be acquired by entry or lease for a period usually of 21 years, renewable for further periods of like duration, on the terms and conditions specified in the various Acts and Regulations relating to federal lands.

The disposal of minerals occurring in Indian reserves is subject to the consent of the Indians occupying the reserve.

The Acts and Regulations governing mining and quarrying on federal lands are summarized in Report No. 828, entitled *Mining Laws of Canada*, issued in 1950 by the Mines Branch, Department of Mines and Technical Surveys, Ottawa. This publication also lists all the laws and regulations pertaining to mining on federal lands. Copies of these individual Acts and Regulations may be obtained by applying to the Northern Administration and Lands Branch, mentioned above. Another publication of interest in connection with mining regulations and available from the aforementioned Mines Branch is entitled *Summary Review of Dominion Tax and Other Legislation Affecting Mining Enterprises in Canada.*

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* Revised under the direction of Marc Boyer, Deputy Minister, in the Editorial and Information Division, Department of Mines and Technical Surveys, Ottawa.

Provincial Mining Laws and Regulations.*—All Crown mineral lands lying within the boundaries of the several provinces (with the exception of those within Indian reserves and National Parks which are under the jurisdiction of the Federal Government) are administered by the respective provincial governments.

The granting of land in any province, except Ontario and Nova Scotia, no longer carries with it mining rights upon or under such land. In Ontario, mineral rights are expressly reserved if they are not to be included. In Nova Scotia, all minerals belong to the Crown except limestone, gypsum and building materials and, in granting land from the Crown, the right to these minerals goes with the title. Some early grants in British Columbia, Alberta, Saskatchewan, Manitoba, New Brunswick and Quebec also included certain mineral rights. Otherwise, mining rights must be separately obtained by lease or grant from the provincial authority administering the mining laws and regulations. Mining activities may be classified as placer, general minerals (or veined minerals and bedded minerals), fuels (coal, petroleum, gas) and quarrying. Under these divisions of the provincial mining industry, regulations are summarized as follows:—

Placer.—In those provinces in which placer deposits occur there are regulations defining the size of placer holdings, the terms under which they may be acquired and held, and the royalties to be paid.

General Minerals.—These minerals are sometimes described as quartz, lode, or minerals in place. With the exception of British Columbia, the most elaborate laws and regulations apply in this division. In all provinces, except Alberta, a prospector's or miner's licence, valid for one year, must be obtained to search for mineral deposits, the licence being general in some cases but limited in others. A claim of promising ground of a specified size may then be staked. This claim must be recorded within a time limit, and payment of recording fees made, except in Quebec where no fees are required. Work to a specified value per annum must be performed upon the claim for a period of up to ten years. There is no time limit in British Columbia but $500 assessment work, of which a survey may represent one-fifth, must be performed and recorded before a Crown grant may be obtained. In Quebec, a specified number of man-days of work must be performed and the excess may be carried forward for renewals of licence. Before mining can be commenced, a mining concession must be purchased for which it is necessary to produce an engineer's report indicating the presence of an orebody. The taxation applied most frequently is a percentage of net profits of producing mines or royalties. In the Province of Newfoundland, the provincial mining tax has been modified since Confederation on Mar. 31, 1949, to conform with the provincial obligations under the Federal-Provincial Tax Agreement. No other form of taxation or royalties now exists.

Fuels.—In provinces where coal occurs, the size of holdings is laid down, together with the conditions of work and rental under which they may be held. In Quebec, ordinary mining claims give rights to all mineral substances and to their development, and stakings for combustible natural gas, salt, coal, mineral oil or naphtha, or iron sands may cover 1,280 acres per claim. Royalties are sometimes provided for. Acts or regulations govern methods of production. In the search for petroleum and natural gas, an exploration permit or reservation is usually required. However, in Alberta, Saskatchewan and British Columbia, leases usually follow the exploration reservation whether or not any discovery of oil or gas is made, because exploration costs are applicable in part on the first year's rental. In other provinces, except Manitoba, the discovery of oil or gas is usually prerequisite to obtaining a lease or grant of a limited area subject to carrying out drilling obligations and paying a rental, fees, or a royalty on production.

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* Compiled from material supplied by the provincial governments.

Quarrying.—Regulations under this heading define the size of holdings and the terms of lease or grant. On Quebec private lands, the quarry belongs to the owner; on Crown lands, mineral rights belong to the Crown and may be obtained in accordance with the provisions of the law, although the rights to exploit peat or marl must be obtained by special licence. In British Columbia quarry rights are not reserved in Crown grants.

Copies of mining legislation including regulations and other details may be obtained from the provincial authorities concerned.

Section 4.—Statistics of Mineral Production*

The importance of mineral production, as compared with other primary industries in Canada, is indicated in Chapter XVII, and its part in the foreign trade of Canada is dealt with in Chapter XXII.

Subsection 1.—Value and Volume of Mineral Production

Historical Statistics.—Definite records of the annual value of mineral production go back to 1886 only, although actual production began with the earliest settlements. The figures given in Table **1** are not strictly comparable throughout the whole period, as minor changes have been adopted in methods of computing both the metallic content of ores sold and the valuations of the products. Earlier methods resulted in a somewhat higher value than those now in use would have shown. However, the changes do not interfere with the general usefulness of the figures in showing the broad trends in the mineral industry.

Except for the 1920-30 period, the value of Canada's mineral production practically doubled each decade since the turn of the century. From $64,000,000 in 1900, it rose to $107,000,000 in 1910 and $228,000,000 in 1920. In 1930, it was $280,000,000, rising to $530,000,000 in 1940, $1,045,000,000 in 1950 and $1,331,211,503 in 1953. Similarly, the revised index of physical volume of output from Canadian mines (*see* p. 514) advanced from 37·6 (average 1935-39 = 100) in 1920 to 63·9 in 1930 and 125·7 in 1940. In the next decade, however, the volume gain was not quite so rapid, the index standing at 145·4 in 1950 and 185·8 in 1953.

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* Revised in the Mining, Metallurgical and Chemical Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

1.—Value of Mineral Production, 1886-1953

Year	Total Value	Value per Capita	Year	Total Value	Value per Capita	Year	Total Value	Value per Capita
	$	$		$	$		$	$
1886	10,221,255	2·23	1932	191,228,225	18·19	1943	530,053,966	44·94
1890	16,763,353	3·51	1933	221,495,253	20·83	1944	485,819,114	40·67
1895	20,505,917	4·08	1934	278,161,590	25·90	1945	498,755,181	41·32
1900	64,420,877	12·15	1935	312,344,457	28·80	1946	502,816,251	40·91
1905	69,078,999	11·51	1936	361,919,372	33·05	1947	644,869,975	51·38
1910	106,823,623	15·29	1937	457,359,092	41·41	1948	820,248,865	63·97
1915	137,109,171	17·18	1938	441,823,237	39·62	1949[2]	901,110,026	67·01
1920	227,859,665	26·63	1939	474,602,059	42·12	1950	1,045,450,073	76·24
1925	226,583,333	24·38	1940	529,825,035	46·55	1951	1,245,483,595	88·33
1930	279,873,578	27·42	1941	560,241,290	48·69	1952	1,285,342,353	89·07
1931[1]	230,434,726	22·21	1942	566,768,672	48·63	1953[r]	1,331,211,503	90·06

[1] Beginning with 1931, exchange equalization on gold production is included. [2] Includes value of Newfoundland production from 1949.

Current Production.—Mineral production in Canada during 1953 reached a new high value of $1,331,200,000, a figure $45,900,000 or 3·6 p.c. above the previous year's total. The outstanding gain was in crude petroleum, which was $55,100,000 above the recorded value for 1952. Cement was up nearly $12,000,000 and iron ore about $9,000,000. In contrast, the output value for zinc dropped $34,400,000, gold was lower by $13,400,000 and coal was down nearly $8,300,000.

The value of metals was down 2·6 p.c. from $727,900,000 in 1952 to $708,900,000 in 1953. Prolonged strikes at some of the gold mines curtailed output during the latter half of the year, so that the annual total amounted to 4,061,000 oz. t. valued at $139,800,000 compared with 4,472,000 oz. t. at $153,200,000 in 1952. Copper production was about 2 p.c. lower than in 1952 but higher prices raised the total value slightly to $150,600,000. Zinc output rose 7 p.c. and lead gained 16·8 p.c., but price declines resulted in much lower values for these metals at $95,400,000 and $52,000,000, respectively. Iron-ore shipments at 6,500,000 tons were the highest on record. Re-melt iron, a co-product of titanium ore smelting, was valued at $3,800,000. Nickel at $160,900,000 had the greatest value of any individual metal.

Mineral fuels, valued at $311,200,000, in 1953, increased 18 p.c. over 1952. Crude petroleum output increased to 81,300,000 bbl. valued at $198,100,000, thus leading all other minerals in value of production and exceeding gold which had held first place for nearly 25 years. On the other hand, coal production at 15,800,000 tons recorded a drop of nearly 1,700,000 tons from 1952, as several coal mines ceased operations. Natural gas output was close to 100,000,000,000 cu. feet valued at $11,000,000.

Other non-metallic minerals were valued at $127,500,000 in 1953. Of that amount $87,600,000 was for asbestos, which fell slightly in both quantity and value as compared with 1952. Barite output was nearly double the 1952 production but most of the other non-metals, such as feldspar, fluorspar, mica, talc and salt, showed little change.

A new high was established for structural materials at $183,600,000 as compared with $168,800,000 in 1952. The increase was attributed to advances in the cement and clay products industries.

2.—Quantity and Value of Minerals Produced, 1951-53

Mineral	1951		1952		1953p	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
Metallics						
Antimony lb.	6,702,164	1,436,713	2,330,900	601,483	1,530,000	344,290
Beryllium ore ton	—	—	—	—	—	—
Bismuth lb.	230,298	543,504	162,373	347,224	98,821	197,308
Cadmium "	1,326,920	3,556,145	948,587	2,086,891	1,315,989	2,631,978
Cobalt "	951,607	1,999,612	1,421,923	3,226,903	1,754,324	3,772,880
Copper "	539,941,589	149,026,216	516,075,097	146,679,040	503,224,887	150,631,485
Gold oz. t.	4,392,751	161,872,873	4,471,725	153,246,016	4,061,205	139,826,286
Indium "	582	1,368	404	909	6,000	13,500
Iron ore ton	4,680,510	31,141,112	5,271,849	33,744,311	6,501,060	42,722,000
Iron ingots "	15,554	777,142	32,422	1,815,007	97,682	3,776,000
Lead lb.	316,462,751	58,229,146	337,683,891	54,671,021	394,458,042	51,969,847
Magnesium and calcium "	...	3,618,219	...	4,812,368	...	4,607,633
Molybdenite "	381,596	228,958	505,964	409,831	152,521	114,390
Nickel "	275,806,272	151,269,994	281,117,072	151,349,438	287,931,430	160,861,368
Palladium, rhodium, iridium, etc oz. t.	164,905	7,950,107	157,407	7,559,109	161,550	7,396,897
Pitchblende products	[1]	[1]	[1]	[1]	[1]	[1]
Platinum oz. t.	153,483	14,542,515	122,317	10,916,792	134,108	12,237,355
Selenium lb.	382,603	1,239,633	242,030	786,599	356,500	1,312,600
Silver oz. t.	23,125,825	21,865,467	25,222,227	21,065,603	30,145,259	25,334,503
Tellurium lb.	8,913	16,400	6,035	10,259	16,430	28,758
Tin "	346,718	494,073	212,113	253,581	656,000	656,000
Titanium ore ton	1,674	9,790	51	459	4,658	27,566
Tungsten concentrates. lb.	2,833	7,098	1,493,111	4,488,237	2,384,554	5,051,508
Zinc "	682,224,335	135,762,643	743,604,155	129,833,285	797,647,860	95,398,683
Totals, Metallics	...	**745,588,728**	...	**727,904,366**	...	**708,912,835**
Non-metallics (excluding Fuels)						
Arsenious oxide lb.	2,353,362	129,435	1,708,351	76,876	1,424,250	78,333
Asbestos ton	973,198	81,584,345	929,339	89,254,913	911,713	87,633,124
Barite "	98,113	1,131,917	136,002	1,521,162	248,973	2,316,474
Diatomite "	92	3,148	28	1,074	3	150
Feldspar "	40,749	551,097	20,267	330,635	20,564	337,716
Fluorspar "	74,211	2,189,875	82,187	2,523,408	90,078	2,657,104
Graphite "	1,569	231,167	2,040	255,732	3,476	361,184
Grindstone "	60	6,000	42	5,720	15	900
Gypsum "	3,802,692	5,880,853	3,590,783	6,538,074	3,765,763	7,487,928
Iron oxide "	13,342	262,277	11,487	194,922	9,297	172,037
Magnesitic dolomite, brucite "	...	2,437,773	...	2,715,266	...	3,122,122
Mica lb.	4,961,508	447,650	2,014,941	194,106	1,856,713	171,372
Mineral water imp. gal.	325,300	146,971	311,495	166,033	312,400	166,450
Nepheline syenite ton	81,108	1,114,943	82,681	1,111,950	108,000	1,402,000
Peat moss "	76,809	2,433,008	74,899	2,443,765	84,847	2,497,219
Perlite "	—	—	—	—	1,100	10,000
Phosphate rock "	6	94	—	—	—	—
Quartz "	1,904,885	2,258,468	1,783,081	2,253,500	1,651,791	1,608,195
Salt "	964,525	7,905,977	971,903	7,774,815	946,650	7,356,595
Silica brick M	3,510	465,229	3,544	606,394	4,155	735,695
Soapstone and talc ton	24,846	283,624	25,032	280,612	26,863	294,250
Sodium sulphate "	192,371	2,383,770	122,590	1,708,807	112,881	1,704,313
Sulphur[2] "	371,790	3,120,785	423,788	3,851,183	333,873	3,127,464
Titanium dioxide "	14,123	738,577	30,805	1,238,103	98,660	4,217,000
Totals, Non-metallics	...	**115,706,983**	...	**125,047,050**	...	**127,457,625**

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[1] Not released for publication. [2] Sulphur content of pyrite shipped and estimated sulphur contained in the sulphuric acid made from smelter gases.

2.—Quantity and Value of Minerals Produced, 1951-53—concluded

Mineral	1951		1952		1953p	
	Quantity	Value	Quantity	Value	Quantity	Value
		$		$		$
Fuels						
Coal ton	18,586,823	109,038,835	17,579,002	111,026,149	15,760,000	102,100,000
Natural gas M cu. ft.	79,460,667	7,158,920	88,686,465	9,517,638	99,628,189	11,023,350
Peat ton	50	1,100	32	320	30	300
Petroleum, crude bbl.	47,615,534	116,655,238	61,237,322	143,038,212	81,311,531	198,111,542
Totals, Fuels	...	**232,854,093**	...	**263,582,319**	...	**311,235,192**
Structural Materials						
Clay products, brick, tile, etc.	...	23,527,656	...	24,961,528	...	29,220,283
Cement bbl.	17,007,812	40,446,288	18,520,538	48,059,470	22,577,144	59,839,705
Lime ton	1,241,041	14,082,520	1,175,786	13,613,221	1,184,963	13,457,648
Sand and gravel "	92,972,821	44,627,559	102,895,545	51,339,043	101,399,474	50,800,061
Stone "	18,676,706	28,649,768	18,726,196	30,835,356	19,548,262	30,288,154
Totals, Structural Materials	...	**151,333,791**	...	**168,808,618**	...	**183,605,851**
Grand Totals	...	**1,245,483,595**	...	**1,285,342,353**	...	**1,331,211,503**

Analysis of Current Value and Volume.—To assist in clearer and simpler interpretation of the trends in mineral production in Canada over the past ten years, the percentage of the total value contributed by each principal mineral in each year is given in Table **3**. Values upon which percentages in this table are based are the annual values of mineral production, expressed in Canadian currency, as shown in Tables **1** and **2**.

3.—Percentage of the Total Value Contributed by Principal Minerals, 1944-53

Mineral	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953p
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
METALLICS										
Copper	13·4	11·9	9·3	14·2	13·1	11·6	11·8	11·9	11·4	11·3
Gold	23·2	20·8	20·7	16·7	15·1	16·5	16·2	13·0	11·9	10·5
Lead	2·8	3·5	4·8	6·9	7·3	5·6	4·6	4·7	4·3	3·9
Nickel	14·2	12·4	9·0	11·0	10·6	11·0	10·7	12·1	11·8	12·0
Platinum metals	1·7	5·4	2·6	1·5	2·0	2·2	1·7	1·8	1·4	1·5
Silver	1·2	1·2	2·1	1·4	1·5	1·5	1·8	1·8	1·6	1·9
Zinc	4·9	6·7	7·3	7·2	8·0	8·5	9·4	10·9	10·1	7·2
TOTALS, METALLICS[1]	63·5	63·6	57·8	61·3	59·6	59·8	59·0	59·9	56·7	53·2
NON-METALLICS (EXCLUDING FUELS)										
Asbestos	4·2	4·6	5·0	5·1	5·1	4·4	6·3	6·5	6·9	6·6
Gypsum	0·3	0·4	0·7	0·7	0·7	0·6	0·6	0·5	0·5	0·6
Quartz	0·3	0·3	0·3	0·3	0·3	0·2	0·2	0·2	0·2	0·1
Salt	0·8	0·8	0·7	0·7	0·6	0·6	0·7	0·6	0·6	0·6
Sulphur	0·4	0·4	0·4	0·3	0·2	0·2	0·2	0·2	0·3	0·2
TOTALS, NON-METALLICS[1]	7·7	8·0	8·7	8·5	8·2	7·1	9·0	9·3	9·7	9·6

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[1] Includes minor items not specified.

3.—Percentage of the Total Value Contributed by Principal Minerals, 1944-53—concluded

Mineral	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953p
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Fuels										
Coal	14·5	13·5	15·0	12·0	13·0	12·3	10·5	8·7	8·6	7·7
Natural gas	2·3	2·5	2·4	2·1	1·9	1·3	0·6	0·6	0·7	0·8
Petroleum	3·2	2·7	3·0	3·0	4·6	6·8	8·1	9·4	11·1	14·9
Totals, Fuels	20·0	18·7	20·4	17·1	19·5	20·4	19·2	18·7	20·4	23·4
Structural Materials										
Clay products	1·4	1·8	2·4	2·2	2·1	2·0	2·1	1·9	1·9	2·2
Cement	2·4	2·9	4·0	3·4	3·4	3·6	3·4	3·2	3·7	4·5
Lime	1·4	1·3	1·4	1·3	1·3	1·3	1·2	1·1	1·1	1·0
Sand and gravel	2·1	2·1	3·1	3·6	3·7	3·5	3·5	3·6	4·0	3·8
Stone	1·5	1·6	2·2	2·6	2·2	2·3	2·5	2·3	2·4	2·3
Totals, Structural Materials	8·8	9·7	13·1	13·1	12·7	12·7	12·7	12·1	13·1	13·8
Grand Totals	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

The total volume of mineral output attained a wartime peak in 1941 when the production index* stood at 132. Principally because of the steady recession in the mining of gold and other principal metals during the next five years, the index gradually declined and reached a ten-year low point of 97 in 1946. Since then, sharp gains in the production of petroleum and other non-metals, together with moderate increases in metals output, resulted in a sustained advance to a record high level of 186 in 1953.

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* The construction of this index, which is a component of the revised index of industrial production, is described in DBS Reference Paper, *Revised Index of Industrial Production, 1935-51.*

4.—Indexes of the Volume of Production of the Principal Mining Industries, 1944-53
(1935-39=100)

Note.—Comparable figures from 1935 are given in the 1954 Year Book, p. 523.

Mineral	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953p
Metallics—										
Gold	69·8	64·4	67·6	73·3	84·3	98·3	105·8	104·0	106·5	97·0
Silver	66·1	62·7	60·7	60·5	77·9	81·2	104·8	102·7	113·3	126·7
Copper	107·3	93·2	72·2	88·5	94·5	99·0	93·4	95·1	91·2	89·6
Nickel	141·6	126·5	99·1	122·2	135·9	132·8	127·7	141·2	144·2	147·4
Lead	78·6	89·4	91·2	83·3	86·1	67·7	64·6	61·6	65·1	76·3
Zinc	153·1	143·8	130·8	115·5	130·1	141·5	145·9	153·0	170·6	186·4
Non-metallics—										
Gypsum	98·5	117·3	210·1	280·0	349·3	346·4	403·6	371·4	370·3	393·8
Asbestos	120·9	135·5	150·3	163·1	176·9	141·8	218·5	245·3	245·2	232·3
Salt	168·3	161·8	129·5	178·9	177·7	181·2	207·2	233·1	234·6	231·2
Fuels—										
Coal	112·3	106·6	115·6	101·7	120·6	124·4	122·9	119·4	112·9	101·8
Petroleum	244·1	205·1	183·4	186·0	297·0	515·0	703·4	1,161·0	1,490·6	1,996·5
Natural gas	93·1	96·5	94·0	102·6	112·7	110·6	116·9	150·8	188·3	157·5
Total Mining	**104·1**	**100·9**	**97·1**	**106·2**	**122·2**	**131·7**	**145·4**	**161·8**	**174·7**	**185·8**

Subsection 2.—Provincial Distribution of Mineral Production

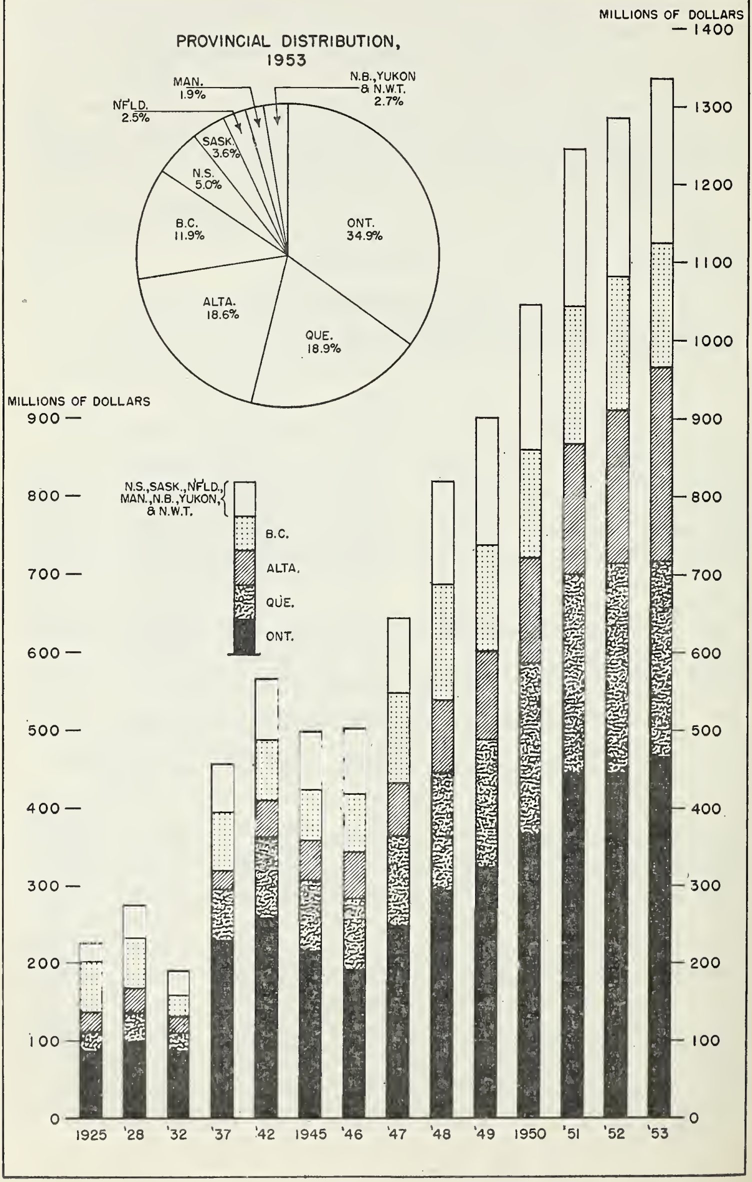
Since 1907 Ontario has been the principal mineral-producing province of Canada. In 1944 that Province accounted for 43 p.c. of Canada's total, but its share declined to 35 p.c. in 1953. Alberta's share of the total showed the greatest increase in the ten-year period, rising from 11 p.c. to 18 p.c., a gain accounted for by the tremendous increase in the crude petroleum output of that Province. The proportions contributed by Quebec and British Columbia remained the same at 19 p.c. and 12 p.c., respectively. Nova Scotia's share decreased from 7 p.c. to 5 p.c., Saskatchewan's from 5 p.c. to 4 p.c., and Manitoba's from 2·8 p.c. to 1·9 p.c. Newfoundland produced about 2·5 p.c. of the total mineral production of Canada in 1953. As compared with 1952, gains in value were registered for all provinces except Quebec, Saskatchewan and British Columbia.

5.—Value of Mineral Production, by Province, 1944-53

Note.—Figures for 1899-1910 are given in the 1933 Year Book, p. 345; for 1911-28 in the 1939 edition, p. 323; and for 1929-43 in the 1946 edition, p. 323.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Northwest Territories	Yukon Territory	Canada
	$	$	$	$	$	$	$	$	$	$	$	$
1944	...	33,981,977	4,133,902	90,182,553	210,706,307	13,830,406	22,291,848	51,066,662	57,246,071	1,440,069	939,319	485,819,114
1945	...	32,220,659	4,182,100	91,518,120	216,541,856	14,429,423	22,336,074	51,753,237	64,063,842	470,812	1,239,058	498,755,181
1946	...	35,350,271	4,813,166	92,785,148	191,544,429	16,403,549	24,480,900	60,082,513	74,622,846	1,039,525	1,693,904	502,816,251
1947	...	34,255,560	5,812,943	115,151,635	249,797,671	18,236,763	32,594,016	67,432,270	116,772,621	2,720,988	2,095,508	644,869,975
1948	...	56,400,245	7,003,285	152,038,867	294,239,673	26,081,349	34,517,208	93,211,229	148,223,614	4,267,485	4,265,910	820,248,865
1949	27,583,615	56,092,830	7,134,009	165,021,513	323,368,644	23,839,638	36,054,536	113,728,425	136,385,911	6,801,729	5,099,176	901,110,026
1950	25,824,047	59,482,173	12,756,975	220,176,517	366,801,525	32,691,173	35,983,923	135,758,940	138,888,205	8,050,899	9,035,696	1,045,450,073
1951	32,410,443	59,727,256	9,564,617	255,530,071	444,667,203	30,045,992	51,032,953	168,144,211	176,278,932	8,288,747	9,793,170	1,245,483,595
1952	32,512,313	64,552,383	11,298,960	270,483,962	444,669,412	25,105,045	49,506,094	196,811,654	170,071,244	8,944,835	11,386,451	1,285,342,353
1953p	33,688,389	67,100,707	11,732,174	252,826,012	460,476,113	25,671,957	48,136,364	245,954,755	160,741,387	10,521,038	14,362,607	1,331,211,503

TOTAL VALUE OF MINERAL PRODUCTION, 1945-53
COMPARED WITH CERTAIN PRECEDING YEARS



6.—Detailed Mineral Production, by Province, 1953

NOTE.—The final figures of mineral production for 1953 became available just as this section of the Year Book went to press and are included in this table; 1953 figures given in other tables of the Chapter are preliminary and are therefore not quite in agreement with this final presentation.

Mineral		New-foundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	North-west Terri-tories	Yukon Territory	Canada
Metallics													
Antimony	lb.	—	—	—	—	—	—	—	—	1,488,105	—	—	1,488,105
	$	—	—	—	—	—	—	—	—	291,862	—	—	291,862
Bismuth	lb.	—	—	—	46,068	—	—	—	—	71,298	—	—	117,366
	$	—	—	—	49,136	—	—	—	—	160,421	—	—	209,557
Cadmium	lb.	—	—	—	—	—	30,987	127,010	—	721,862	—	238,426	1,118,285
	$	—	—	—	—	—	61,974	254,020	—	1,443,724	—	476,852	2,236,570
Cobalt	lb.	—	—	—	—	1,602,545	—	—	—	—	—	—	1,602,545
	$	—	—	—	—	4,013,077	—	—	—	—	—	—	4,013,077
Copper	lb.	5,627,461	1,576,360	—	109,839,871	261,164,653	18,822,890	61,176,869	—	48,295,970	—	—	506,504,074
	$	1,684,862	471,962	—	32,886,057	77,587,439	5,635,573	18,316,355	—	14,371,494	—	—	150,953,742
Gold	oz. t.	7,654	3,248	—	1,021,698	2,182,437	131,309	88,327	65	264,976	289,929	66,080	4,055,723
	$	263,451	111,796	—	35,166,845	75,119,481	4,519,656	3,040,215	2,237	9,120,474	9,979,356	2,274,474	139,597,985
Indium	oz. t.	—	—	—	—	—	—	—	—	6,752	—	—	6,752
	$	—	—	—	—	—	—	—	—	9,588	—	—	9,588
Iron ore	ton	2,686,481	—	—	—	2,832,090	—	—	—	991,247	—	—	6,509,818
	$	14,201,842	—	—	—	23,137,997	—	—	—	6,763,105	—	—	44,102,944
Iron ingots	ton	—	—	—	107,370	—	—	—	—	—	—	—	107,370
	$	—	—	—	4,064,039	—	—	—	—	—	—	—	4,064,039
Lead	lb.	35,403,172	3,652,126	—	18,473,850	656,755	—	—	—	297,634,712	—	31,590,973	387,411,588
	$	4,576,214	472,074	—	2,387,930	84,892	—	—	—	38,472,263	—	4,083,449	50,076,822
Magnesium and calcium	$	—	—	—	...	5,295,840	—	—	—	—	—	—	5,295,840
Molybdenite	lb.	—	—	—	323,907	—	—	—	—	—	—	—	323,907
	$	—	—	—	215,527	—	—	—	—	—	—	—	215,527
Nickel	lb.	—	—	—	—	287,385,777	—	—	—	—	—	—	287,385,777
	$	—	—	—	—	160,430,098	—	—	—	—	—	—	160,430,098
Palladium, iridium, etc.	oz. t.	—	—	—	—	166,018	—	—	—	—	—	—	166,018
	$	—	—	—	—	7,495,409	—	—	—	—	—	—	7,495,409
Platinum	oz. t.	—	—	—	—	137,545	—	—	—	—	—	—	137,545
	$	—	—	—	—	12,550,981	—	—	—	—	—	—	12,550,981
Selenium	lb.	—	—	—	113,533	92,698	10,892	45,223	—	—	—	—	262,346
	$	—	—	—	476,839	389,332	45,746	189,937	—	—	—	—	1,101,854
Silver	oz. t.	648,389	226,225	—	4,571,373	5,154,619	429,508	1,257,622	6	9,308,874	63,592	6,639,127	28,299,335
	$	544,712	190,052	—	3,840,410	4,330,395	360,830	1,056,528	5	7,820,385	53,424	5,577,530	23,774,271
Tellurium	lb.	—	—	—	—	4,525	33	136	—	—	—	—	4,694
	$	—	—	—	—	7,919	58	238	—	—	—	—	8,215

6.—Detailed Mineral Production, by Province, 1953—concluded

Mineral		New-foundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat-chewan	Alberta	British Columbia	North-west Terri-tories	Yukon Territory	Canada
Metallics—concl.													
Tin	lb.	—	—	—	—	—	—	—	—	1,092,228	—	—	1,092,228
	$	—	—	—	—	—	—	—	—	581,746	—	—	581,746
Titanium ore	ton	—	—	—	9,294	—	—	—	—	—	—	—	9,294
	$	—	—	—	80,085	—	—	—	—	—	—	—	80,085
Tungsten concentrates	lb.	—	—	—	—	48,780	—	—	—	2,395,544	—	1,704	2,446,028
	$	—	—	—	—	132,685	—	—	—	5,556,000	—	475	5,689,160
Zinc	lb.	56,003,584	14,698,698	—	200,859,247	171,787	31,532,737	99,929,241	—	382,300,862	—	18,027,139	803,523,295
	$	6,698,029	1,757,964	—	24,022,766	20,546	3,771,315	11,951,537	—	45,723,183	—	2,156,046	96,101,386
Totals, Metalics[1]	$	**27,969,110**	**3,003,848**	—	**103,189,634**	**370,596,091**	**14,395,152**	**34,808,830**	**2,242**	**130,314,245**	**10,032,780**	**14,568,826**	**708,880,758**
Non-metallics													
Arsenious oxide	lb.	—	—	—	—	1,403,740	—	—	—	—	—	—	1,403,740
	$	—	—	—	—	56,150	—	—	—	—	—	—	56,150
Asbestos	ton	—	—	—	884,595	23,529	—	—	—	3,102	—	—	911,226
	$	—	—	—	81,000,775	4,063,404	—	—	—	988,716	—	—	86,052,895
Barite	ton	—	244,349	—	—	—	—	—	—	2,878	—	—	247,227
	$	—	2,167,447	—	—	—	—	—	—	52,845	—	—	2,220,292
Diatomite	ton	—	3	—	—	100	—	—	—	—	—	—	103
	$	—	150	—	—	12,000	—	—	—	—	—	—	12,150
Feldspar	ton	—	—	—	18,591	2,655	—	—	—	—	—	—	21,246
	$	—	—	—	319,146	28,018	—	—	—	—	—	—	347,164
Fluorspar	ton	87,693	—	—	—	876	—	—	—	—	—	—	88,569
	$	2,631,698	—	—	—	38,887	—	—	—	—	—	—	2,670,585
Graphite	ton	—	—	—	—	3,466	—	—	—	—	—	—	3,466
	$	—	—	—	—	366,528	—	—	—	—	—	—	366,528
Grindstone	ton	—	—	15	—	—	—	—	—	—	—	—	15
	$	—	—	900	—	—	—	—	—	—	—	—	900
Gypsum	ton	26,531	3,050,832	120,816	—	334,495	163,313	—	—	145,470	—	—	3,841,457
	$	117,208	5,200,420	380,570	—	899,630	414,401	—	—	387,655	—	—	7,399,884
Iron oxide	ton	—	—	—	10,308	—	—	—	—	—	—	—	10,308
	$	—	—	—	195,801	—	—	—	—	—	—	—	195,801
Magnesitic dolomite, brucite	ton	—	—	—	...	—	—	—	—	—	—	—	...
	$	—	—	—	3,056,392	—	—	—	—	—	—	—	3,056,392
Mica	lb.	—	—	—	1,478,615	466,513	—	—	—	320,000	—	—	2,265,128
	$	—	—	—	99,080	59,168	—	—	—	2,880	—	—	161,128
Mineral water	gal.	—	—	—	309,285	300	—	—	—	—	—	—	309,585
	$	—	—	—	165,334	150	—	—	—	—	—	—	165,484

Nepheline syenite	ton	—	—	—	—	113,345	—	—	—	—	—	—	113,345
	$	—	—	—	—	1,576,271	—	—	—	—	—	—	1,576,271
Peat, moss	ton	—	150	8,323	22,021	1,319	2,085	—	—	47,756	—	—	81,654
	$	—	5,706	246,946	587,671	52,535	92,433	—	—	1,657,728	—	—	2,643,019
Pearlite	ton	—	—	—	—	—	—	—	—	1,112	—	—	1,112
	$	—	—	—	—	—	—	—	—	11,120	—	—	11,120
Quartz	ton	—	—	—	165,706	1,450,770	—	152,786	—	16,312	—	—	1,785,574
	$	—	—	—	603,524	1,301,048	—	76,393	—	89,652	—	—	2,070,617
Salt	ton	—	127,819	—	—	749,046	18,078	35,100	24,885	—	—	—	954,928
	$	—	1,272,463	—	—	3,919,810	420,631	760,082	601,515	—	—	—	6,974,501
Silica brick	M	—	2,253	—	—	1,467	—	—	—	—	—	—	3,720
	$	—	399,096	—	—	313,175	—	—	—	—	—	—	712,271
Soapstone and talc	ton	—	—	—	14,098	13,310	—	—	—	—	—	—	27,408
	$	—	—	—	160,546	125,209	—	—	—	—	—	—	285,755
Sodium sulphate	ton	—	—	—	—	—	—	115,565	—	—	—	—	115,565
	$	—	—	—	—	—	—	1,681,258	—	—	—	—	1,681,258
Sulphur	ton	—	—	—	169,766	37,130	—	—	—	151,954	—	—	358,850
	$	—	—	—	1,211,343	371,300	—	—	—	1,590,055	—	—	3,172,698
Titanium dioxide	ton	—	—	—	100,527	—	—	—	—	—	—	—	100,527
	$	—	—	—	4,206,496	—	—	—	—	—	—	—	4,206,496
Totals, Non-metallics	$	**2,748,906**	**9,045,282**	**628,416**	**91,606,108**	**13,183,283**	**927,465**	**2,517,733**	**601,515**	**4,780,651**	—	—	**126,039,359**
Fuels													
Coal	ton	—	5,787,026	721,252	—	—	—	2,021,304	5,917,474	1,443,006	—	10,611	15,900,673
	$	—	51,997,545	5,747,073	—	—	—	3,834,455	32,110,429	8,862,637	—	169,736	102,721,875
Natural gas	M cu. ft.	—	—	177,112	—	9,708,969	—	1,422,128	89,651,605	—	26,109	—	100,985,923
	$	—	—	131,368	—	3,883,588	—	127,992	6,723,870	—	10,199	—	10,877,017
Petroleum, crude	bbl.	—	—	14,738	—	299,685	653,514	2,797,888	76,816,383	—	316,689	—	80,898,897
	$	—	—	20,633	—	994,835	1,714,806	3,833,107	193,761,644	—	257,251	—	200,582,276
Totals, Fuels	$	—	**51,997,545**	**5,899,074**	—	**4,878,423**	**1,714,806**	**7,795,554**	**232,595,943**	**8,862,637**	**267,450**	**169,736**	**314,181,168**
Structural Materials													
Clay products	$	39,500	1,234,319	620,769	8,070,942	14,829,222	568,477	742,959	2,135,085	1,536,458	—	—	29,777,731
Cement	bbl.	395,834	—	823,900	7,400,912	7,078,181	1,614,301	—	3,098,664	1,826,543	—	—	22,238,335
	$	1,345,073	—	2,104,469	19,232,112	18,497,744	4,676,137	—	7,915,227	5,071,260	—	—	58,842,022
Lime	ton	160	—	21,184	424,305	659,062	50,981	—	29,263	43,805	—	—	1,228,760
	$	6,942	—	430,226	4,236,639	7,714,252	787,032	—	430,924	877,998	—	—	14,484,013
Sand and gravel	ton	1,908,187	1,523,083	2,648,235	26,694,125	43,658,099	4,686,323	4,770,368	7,651,261	7,494,268	—	—	101,033,949
	$	1,023,622	1,459,770	1,282,421	11,630,482	24,359,496	1,524,629	2,216,894	5,097,720	4,890,367	—	—	53,485,401
Stone	ton	391,633	193,101	987,977	7,754,248	8,818,886	377,819	—	18,833	1,306,520	—	—	19,849,017
	$	647,469	623,644	698,243	13,915,864	11,818,582	670,414	—	84,639	2,154,196	—	—	30,613,051
Totals, Structural Materials	$	**3,062,606**	**3,317,733**	**5,136,128**	**57,086,039**	**77,219,296**	**8,226,689**	**2,959,853**	**15,663,595**	**14,530,279**	—	—	**187,202,218**
Grand Totals, 1953	$	**33,780,622**	**67,364,408**	**11,663,618**	**251,881,781**	**465,877,093**	**25,264,112**	**48,081,970**	**248,863,295**	**158,487,812**	**10,300,230**	**14,738,562**	**1,336,303,503**
1952	$	**32,512,313**	**64,552,383**	**11,298,960**	**270,483,962**	**444,669,412**	**25,105,045**	**49,506,094**	**196,811,654**	**170,071,244**	**8,944,835**	**11,386,451**	**1,285,342,353**

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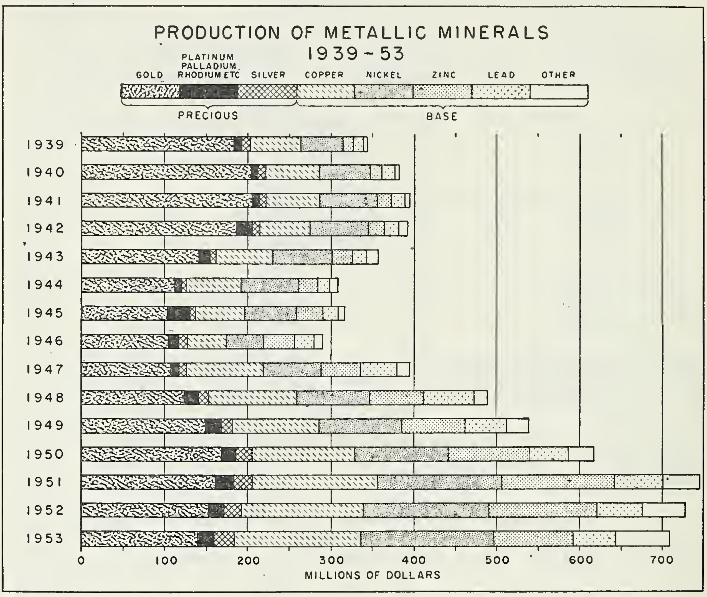
[1] Figures for pitchblende not released for publication.

Subsection 3.—Production of Metallic Minerals

The metals of chief importance in Canada are nickel, copper, gold, zinc, lead, iron, silver and those of the platinum group. These metals are dealt with individually in the following paragraphs. In addition, there are a number of metals produced in minor quantities, principally as by-products in the treatment of metalliferous ores (*see* Tables **2** and **6**).



Nickel.—The total value of nickel produced in 1953 exceeded the value of gold for the first time since 1920. The total 1953 value of $160,900,000 included refined nickel, nickel in oxides and salts, and nickel in matte exported. Export shipments amounted to 79,900 tons of refined nickel and 63,900 tons of nickel in matte.

The two principal producers, International Nickel Company of Canada Limited and Falconbridge Mines Limited operated at capacity during the year. Both have substantial expansions under way to meet long-term contracts for the United States Government as well as for expanding domestic demands. Three new mines in the Sudbury area of Ontario—East Rim Nickel Mines, Milnet Mines and Nickel Offsets Limited—shipped ore or concentrates to the Falconbridge smelter. In Manitoba, the railroad to the Lynn Lake nickel-copper project of Sherritt Gordon Mines Limited was completed in November 1953 and the first shipments of nickel moved early in 1954.

7.—Quantity and Value of Nickel Produced, 1944-53

NOTE.—Figures for 1889-1910 are given in the 1929 Year Book, p. 368; for 1911-28 in the 1939 edition, p. 342; and for 1929-43 in the 1946 edition, p. 333.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1944	137,299	69,204,152	1949	128,690	99,173,289
1945	122,565	61,982,133	1950	123,659	112,104,685
1946	96,062	45,385,155	1951	137,903	151,269,994
1947	118,626	70,650,764	1952	140,559	151,349,438
1948	131,740	86,904,235	1953p	143,966	160,861,368

Copper.—In 1953 copper production recorded a decrease of 2·5 p.c. as compared with 1952, but the value increased by nearly 3 p.c. More than half of the 1953 output of 251,600 tons came from mines in Ontario. In Quebec, labour strikes in the Noranda area, which forced the mines and smelter to remain closed for some months, resulted in a decrease of 22 p.c. in output as compared with 1952. In Manitoba and Saskatchewan output was about the same in both years, while in British Columbia an increase of 15 p.c. was shown in 1953. Newfoundland continued to ship concentrates to smelters in the United States, and the recoverable copper in the concentrates shipped from the base-metal mine in Nova Scotia was more than twice the amount shipped in the previous year.

Development of the Sherritt Gordon nickel-copper mine at Lynn Lake, Man., has continued and shipments of copper concentrates to custom smelters started early in 1954.

8.—Copper Production, by Province, and Total Value, 1944-53

NOTE.—Figures for 1886-1910 are given in the 1916-17 Year Book, p. 272; for 1911-28 in the 1939 edition, p. 335; and for 1929-43 in the 1946 edition, p. 331.

Year	Newfoundland	Quebec	Ontario	Manitoba	Saskatchewan	British Columbia	Canada	
							Quantity	Value
	tons	tons	tons	tons	tons	tons	tons	$
1944	...	54,027	142,654	21,939	36,757	18,152	273,535[1]	65,257,172[1]
1945	...	51,342	119,726	20,563	32,950	12,876	237,457	59,322,261
1946	...	34,899	89,712	19,250	31,356	8,750	183,967	46,632,093
1947	...	42,561	113,934	15,316	33,151	20,900	225,862	91,541,888
1948	...	48,813	120,383	18,960	31,074	21,502	240,732	107,159,756
1949	3,617	67,822	113,042	16,960	34,960	27,055	263,456	104,719,151
1950	3,221	72,891	117,210	20,817	28,982	21,086	264,207	123,211,407
1951	2,899	68,866	128,808	15,839	31,625	21,932	269,970[1]	149,026,216[1]
1952	2,959	68,846	125,343	9,374	30,344	20,786	258,038[2]	146,679,040[2]
1953p	2,762	53,905	130,123	9,316	30,536	24,011	251,612[3]	150,631,485[3]

[1] Includes 6 tons valued at $1,428 produced in N.W.T. in 1944 and 1 ton valued at $536 in 1951. [2] Includes 383 tons valued at $218,663 produced in Nova Scotia and 3 tons valued at $1,969 produced in N.W.T. [3] Includes 959 tons valued at $574,441 produced in Nova Scotia.

Gold.—Gold is no longer the leading mineral in total value of production. It was surpassed in 1953 by petroleum, nickel and copper. Production of gold was reduced in that year by the strike action in the Porcupine district of Ontario and in the Noranda area of Quebec. The output of 4,061,000 oz. t. was a decline of 9 p.c. from 1952 and was the lowest figure reported since 1948. The gold mines received a slightly higher price for their product in 1953 but because of the smaller average premium on the Canadian dollar and the choice of selling in the open market the industry was still depressed by high operating costs and narrow profit margins. Production was lower in every province except Nova Scotia and in the Northwest Territories there was an increase of 18 p.c.

9.—Quantity and Value of Gold Produced, by Province, 1944-53

Note.—Values are calculated at world prices in Canadian funds. Figures for 1862-1910 are given in the 1916-17 Year Book, pp. 268-269; for 1911-28 in the 1939 edition, pp. 336-337; and for 1929-43 in the 1946 edition, p. 332.

Year	Newfoundland		Nova Scotia		Quebec		Ontario	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	$	oz. t.	$	oz. t.	$	oz. t.	$
1944	...	...	5,840	224,840	746,784	28,751,184	1,731,836	66,675,686
1945	...	...	3,291	126,704	661,608	25,471,908	1,625,368	62,576,668
1946	...	...	4,321	158,797	618,339	22,723,958	1,813,333	66,639,988
1947	...	...	1,271	44,485	598,127	20,934,445	1,944,819	68,068,665
1948	...	...	188	6,580	770,625	26,971,875	2,095,377	73,338,195
1949	9,269	333,684	64	2,304	964,184	34,710,624	2,354,509	84,762,324
1950	9,254	352,115	65	2,473	1,094,645	41,651,242	2,481,110	94,406,236
1951	8,515	313,778	17	626	1,067,306	39,330,226	2,462,979	90,760,776
1952	8,595	294,551	1,433	49,109	1,113,204	38,149,501	2,513,691	86,144,190
1953p	7,575	259,806	3,402	117,130	1,018,575	35,069,537	2,182,544	75,144,989

Year	Manitoba		Saskatchewan		Alberta		British Columbia	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	$	oz. t.	$	oz. t.	$	oz. t.	$
1944	74,168	2,855,468	122,782	4,727,107	51	1,963	196,857	7,578,994
1945	70,655	2,720,218	108,568	4,179,868	7	269	186,854	7,193,879
1946	79,402	2,918,024	112,101	4,119,712	110	4,042	136,242	5,006,893
1947	72,906	2,551,710	93,747	3,281,145	78	2,730	249,011	8,715,385
1948	106,176	3,716,160	87,927	3,077,445	78	2,730	306,998	10,744,930
1949	137,399	4,946,364	94,208	3,391,488	115	4,140	304,307	10,955,052
1950	191,725	7,295,136	79,784	3,035,781	152	5,784	290,490	11,053,144
1951	163,914	6,040,231	110,216	4,061,460	97	3,574	289,992	10,686,205
1952	141,947	4,864,524	93,585	3,207,158	111	3,804	273,059	9,357,732
1953p	132,500	4,561,975	87,150	3,000,575	55	1,894	267,000	9,192,810

Year	Northwest Territories		Yukon Territory		Canada	
	Quantity	Value	Quantity	Value	Quantity	Value
	oz. t.	$	oz. t.	$	oz. t.	$
1944	20,775	799,838	23,818	916,993	2,922,911	112,532,073
1945	8,655	333,218	31,721	1,221,258	2,696,727	103,823,990
1946	23,420	860,685	45,286	1,664,260	2,832,554	104,096,359
1947	62,517	2,188,095	47,745	1,671,075	3,070,221	107,457,735
1948	101,625	3,556,875	60,614	2,121,490	3,529,608	123,536,280
1949	177,493	6,389,748	81,970	2,950,920	4,123,518	148,446,648
1950	200,663	7,635,227	93,339	3,551,549	4,441,227	168,988,687
1951	212,211	7,819,975	77,504	2,856,022	4,392,751	161,872,873
1952	247,581	8,484,601	78,519	2,690,846	4,471,725	153,246,016
1953p	292,741	10,079,073	69,663	2,398,497	4,061,205	139,826,286

Zinc.—The production of zinc continued to increase and reached an all-time high in 1953 with an output of 399,000 tons valued at $95,400,000.

Newfoundland's production declined about 10 p.c. as compared with 1952 but Nova Scotia increased its output from 4,400 tons to 7,500 tons. Output of some of the mines in the Noranda area of Quebec was affected by labour disputes but other mines in the Province increased their production, advancing the provincial total to over 100,000 tons. In British Columbia there was an increase of 8 p.c. and in Yukon a rise of 76 p.c. The lowering of the prices of lead and zinc forced about 20 marginal producers in British Columbia to close down during 1953.

Production of refined zinc totalled 248,000 tons and domestic consumption remained steady at 51,000 tons. Zinc exported in ores and concentrates included 169,000 tons to the United States, 9,600 tons to Belgium, 6,900 to France, 4,200 to Great Britain and 3,200 to Norway.

10.—Quantity and Value of Zinc Produced, 1944-53

NOTE.—Figures for 1911-28 are given in the 1939 Year Book, p. 347, and for 1929-43 in the 1946 edition, p. 335.

Year	Quantity[1]	Value	Average Price per lb.	Year	Quantity[1]	Value	Average Price per lb.
	tons	$	cts.		tons	$	cts.
1944	275,412	23,685,405	4·30	1949	288,264	76,372,147	13·25
1945	258,607	33,308,556	6·44	1950	313,227	98,040,145	15·65
1946	235,310	36,755,450	7·81	1951	341,112	135,762,643	19·90
1947	207,863	46,686,010	11·23	1952	371,802	129,833,285	17·46
1948	234,164	65,237,956	13·93	1953p	398,824	95,398,683	11·96

[1] Estimated foreign smelter recoveries and refined zinc produced in Canada.

Lead.—Estimated lead production in 1953 amounted to 197,000 tons, an increase of 17 p.c. over 1952. The 1953 total included the lead in base bullion produced in Canadian smelters and the computed recoverable content of ores and concentrates exported. British Columbia accounted for 77·8 p.c. of the total, and its output moved up from 129,300 tons in 1952 to 153,000 tons in 1953. The Mackeno Mine came into production in Yukon Territory and its output added to that of the United Keno Mines brought the total for the Territory to 14,000 tons. In Quebec, there were two new contributors, United Montauban and Bowe Mines, but the total production for the Province declined by about 13 p.c. Nova Scotia's only lead producer more than doubled its output of the preceding year. Total refined lead production was about 166,000 tons. Canadian consumers used about 58,000 tons and 102,800 tons of piglead were exported. The lead content of concentrates exported was 61,600 tons, of which 40,600 tons went to the United States, 11,400 to Belgium and 9,600 to West Germany.

11.—Quantity and Value of Lead Produced from Canadian Ores, 1944-53

NOTE.—Figures for 1887-1910 are given in the 1929 Year Book, p. 367; for 1911-28 in the 1939 edition, p. 341; and for 1929-43 in the 1946 edition, p. 333.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1944	152,291	13,706,199	1949	159,775	50,488,879
1945	173,497	17,349,723	1950	165,697	47,886,452
1946	176,987	23,893,230	1951	158,231	58,229,146
1947	161,668	44,200,124	1952	168,842	54,671,021
1948	167,251	60,344,146	1953p	197,229	51,969,847

Iron Ore.—From 1944 the total annual production of iron ore has risen from 500,000 tons to 6,500,000 tons in 1953. In 1953, the Wabana mine in Newfoundland produced over 1,000,000 tons more than in 1952, a result of the mechanization program carried out in recent years. Ontario mines shipped about 4·25 p.c. more iron ore in 1953 than in 1952. The Errington Mine at Steep Rock was converted to underground operations and output commenced at the Hogarth open pit. Algoma Ore Properties Limited continued development work and increased the sintering plant facilities. The two mines in British Columbia shipped most of their iron ore to Japan.

The railroad being constructed from Sept Iles, Que., 360 miles northward to Knob Lake was completed early in 1954 and shipments started later in that year. The Quebec Iron and Titanium Corporation at Sorel, Que., produced 98,000 tons of re-melt iron as a co-product from smelting ilmenite ores. A plant is under construction at Welland, Ont., for the treatment of pyrites; one of the products will be an iron sinter suitable for use by the iron and steel industry. The International Nickel Company of Canada is building a plant at Copper Cliff, Ont., to recover iron concentrates from the treatment of low-grade nickel ores.

12.—Iron-Ore Shipments and Production of Pig-Iron, Ferro-Alloys and Steel Ingots and Castings, 1944-53

Note.—Figures for 1886-1910 are given in the 1936 Year Book, p. 373; for 1911-28 in the 1939 edition, p. 340; and for 1929-43 in the 1946 edition, p. 333.

Year	Iron-Ore Shipments from Canadian Mines	Production of Pig-Iron			Production of Ferro-Alloys	Production of Steel Ingots and Castings
		Nova Scotia	Ontario	Canada		
	tons	tons	tons	tons	tons	tons
1944	553,252	395,802	1,456,826	1,852,628	182,428	3,024,410
1945	1,135,444	374,302	1,403,647	1,777,949	178,214	2,877,927
1946	1,549,523	317,180	1,089,072	1,406,252	137,822	2,327,283
1947	1,919,366	354,789	1,606,787	1,962,848[1]	227,123	2,945,952
1948	1,337,244	438,430	1,687,309	2,125,739	232,734	3,200,480
1949	3,675,096	472,885	1,681,600	2,154,485	202,092	3,190,377
1950	3,605,261	513,029	1,804,092	2,317,121	180,499	3,383,575
1951	4,680,510	485,900	2,066,993	2,552,893	266,252	3,568,720
1952	5,271,849	395,262	2,286,323	2,681,585	232,117	3,703,111
1953p	6,501,060	440,005	2,572,261	3,012,266	150,595	4,115,469

[1] Includes production of 1,272 tons in British Columbia.

Silver.—Silver production continued its upward trend in 1953, amounting to 30,100,000 oz.t. as compared with 25,200,000 oz.t. in 1952. The larger contributors were British Columbia with nearly 11,500,000 oz.t. and Yukon Territory with 6,200,000 oz.t. In the extreme eastern and western areas of Canada, silver is recovered from silver-lead-zinc ores; in Ontario it occurs in the nickel-copper, silver-cobalt, and gold ores; in Quebec it comes from copper-gold-silver and silver-lead-zinc ores; and in Manitoba and Saskatchewan the complex ores of copper-gold-silver-zinc yield sizable quantities of silver.

13.—Quantity of Silver Produced, by Province, and Total Value, 1944-53

NOTE.—Figures for 1887-1910 are given in the 1916-17 Year Book, p. 271; for 1911-28 in the 1939 edition, p. 345; and for 1929-43 in the 1946 edition, p. 334.

Year	Average Price per oz. t. (Canadian funds)	Newfoundland	Nova Scotia	Quebec	Ontario	Manitoba	Saskatchewan	British Columbia	Yukon Territory	Northwest Territories	Canada[1]	
	cts.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	oz. t.	$
1944	43·00	...	188	2,500,681	3,143,275	569,873	1,735,773	5,631,572	32,066	13,677	13,627,109	5,859,656
1945	47·00	...	112	2,149,570	3,185,369	533,883	1,426,457	5,620,323	25,158	2,033	12,942,906	6,083,166
1946	83·65	...	146	1,916,453	2,485,215	528,017	1,498,496	6,078,419	31,230	6,112	12,544,100	10,493,139
1947	72·00	...	97	2,134,189	2,342,032	424,365	1,282,546	5,903,367	372,051	45,355	12,504,018	9,002,893
1948	75·00	...	8	2,376,754	3,210,107	737,298	1,323,900	6,717,908	1,718,618	25,382	16,109,982	12,082,487
1949	74·25	585,966	3	3,250,578	2,562,859	554,266	1,482,009	7,573,506	1,562,730	70,505	17,641,493	13,098,808
1950	80·82	575,524	2	4,343,379	4,408,620	893,099	1,207,796	8,528,107	3,202,779	62,111	23,221,431	18,767,561
1951	94·55	534,519	1	4,154,290	4,520,094	613,141	1,454,341	8,342,414	3,442,788	64,228	23,125,825	21,865,467
1952	83·52	638,524	91,886	4,536,247	6,491,124	412,149	1,179,514	7,784,964	4,028,551	59,258	25,222,227	21,065,603
1953P	84·01	654,268	246,960	4,737,390	5,051,369	426,615	1,238,700	11,479,382	6,244,919	65,650	30,145,259	25,334,503

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[1] Includes relatively small quantities produced in Alberta.

Metals of the Platinum Group.—Included in this group are platinum, palladium, rhodium, ruthenium and iridium. Nearly all the platinoids produced in Canada come from the nickel-copper ores in the Sudbury area of Ontario. The platinum group residues are recovered from the electrolytic tanks in the nickel refinery at Port Colborne, Ont. The nickel-copper matte shipped by Falconbridge Nickel Company Limited contains some platinum-group metals which are recovered at the refinery in Norway. Production in 1953 amounted to 134,000 oz.t. of platinum valued at $12,200,000 and 161,500 oz.t. of palladium, rhodium, etc., valued at $7,400,000.

The industrial uses of the platinum metals have expanded in recent years, particularly for electrical and chemical equipment, jewellery, and medical and dental appliances.

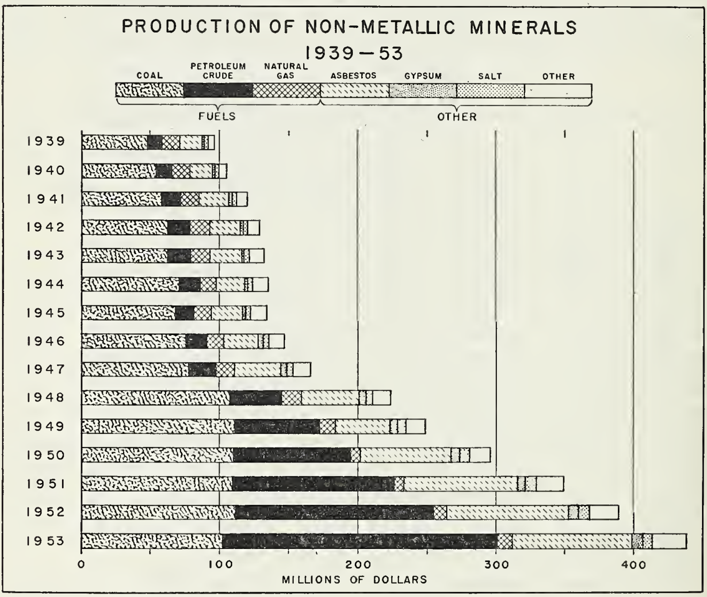
14.—Quantity and Value of Platinum and Palladium[1] Produced, 1944-53

NOTE.—Records of the platinum production go back to 1887 but, prior to 1921, the amounts were comparatively small and the basis of calculation was not comparable with that now used. Figures for 1921-39 are given in the 1940 Year Book, p. 340, and for 1940-43 in the 1951 edition, p. 513.

Year	Platinum		Palladium[1]	
	oz. t.	$	oz. t.	$
1944....	157,523	6,064,635	42,929	1,960,085
1945[2]...	208,234	8,017,010	458,674	18,671,074
1946....	121,771	7,672,791	117,566	5,162,801
1947....	94,570	5,582,467	110,332	4,387,740
1948....	121,404	10,622,850	148,343	6,295,132
1949...	153,784	11,603,002	182,233	8,289,915
1950...	124,571	10,255,929	148,741	7,578,144
1951...	153,483	14,542,515	164,905	7,950,107
1952...	122,317	10,916,792	157,407	7,559,109
1953P..	134,108	12,237,355	161,550	7,396,897

[1] Includes also iridium, rhodium, ruthenium and osmium.

[2] Figures include an accumulated revision for previous years.



Subsection 4.—Production of Non-Metallic Minerals (Excluding Fuels)

The most important minerals in this group are asbestos, gypsum, salt, sulphur; it also includes numerous other items such as magnesitic dolomite, peat moss, quartz, sodium sulphate, fluorspar, barite, nepheline syenite, feldspar, silica brick, mica, soapstone and talc, and graphite (*see* Tables **2** and **6**).

Asbestos.—The producers of asbestos shipped about 912,000 tons valued at $87,600,000 in 1953 as compared with 929,000 tons worth $89,300,000 in 1952. A modernization and expansion program was under way in Quebec and a new mine in British Columbia was progressing favourably at the end of the year.

15.—Quantity and Value of Asbestos Produced, 1944-53

NOTE.—Figures for 1896-1910 are given in the 1911 Year Book, p. 424; for 1911-28 in the 1939 edition, p. 354; and for 1929-43 in the 1946 edition, p. 353.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1944	419,265	20,619,516	1949	574,906	39,746,072
1945	466,897	22,805,157	1950	875,344	65,854,568
1946	558,181	25,240,562	1951	973,198	81,584,345
1947	661,821	33,005,748	1952	929,339	89,254,913
1948	716,769	42,231,475	1953p	911,713	87,633,124

Gypsum.—The production of gypsum was higher in 1953 than in 1952 by 175,000 tons, a result of continued demand by the building trades. Nova Scotia mines accounted for 79 p.c. of the Canadian total.

16.—Quantity of Gypsum Produced, by Province, and Total Value, 1944-53

NOTE.—Figures for 1926-43 are given in the 1943-44 Year Book, p. 321.

Year	Nova Scotia	New Brunswick	Ontario	Manitoba	British Columbia	Canada	
	tons	tons	tons	tons	tons	tons	$
1944	401,284	42,040	90,288	38,330	24,222	596,164	1,511,978
1945	634,960	46,755	92,174	42,275	23,617	839,781	1,783,290
1946	1,538,738	38,839	122,524	63,187	47,649	1,810,937	3,671,503
1947	2,137,704	65,939	155,249	79,356	58,736	2,496,984	4,734,853
1948	2,795,848	61,534	182,303	94,698	82,426	3,216,809	5,548,245
1949	2,555,795	80,436	203,187	94,918	79,913	3,014,249	5,423,690
1950	3,185,199	82,641	199,314	114,555	84,627	3,666,336	6,707,506
1951	3,190,030	109,469	262,581	134,704	105,908	3,802,692	5,880,853
1952	2,969,312	110,183	278,992	130,934	92,702	3,590,783[1]	6,538,074[1]
1953p	2,981,528	120,000	336,997	165,890	133,348	3,765,763[2]	7,487,928[2]

[1] Includes 8,660 tons valued at $54,881 produced in Newfoundland.

[2] Includes 28,000 tons valued at $152,040 produced in Newfoundland.

Salt.—Salt is obtained from brine wells in the Provinces of Ontario, Manitoba and Alberta, but in Nova Scotia it is recovered by mining rock-salt and by evaporation from brine. Domestic production is sold principally to the dairy, meat-curing and canning industries, to fisheries, to highways and transport departments, to agriculturists for use as a soil sweetener, to chemical industries, and as table salt. About 50 p.c. of the salt production is used in making caustic soda, soda ash and related chemicals.

17.—Quantity of Salt Produced, by Province, and Total Value, 1944-53

NOTE.—Figures for the years 1926-43 are given in the 1946 Year Book, p. 354.

Year	Nova Scotia	Ontario	Manitoba	Saskatchewan	Alberta	Canada	
	tons	tons	tons	tons	tons	tons	$
1944	38,809	603,806	27,267	—	25,335	695,217	4,074,021
1945	37,825	578,697	27,133	—	29,421	673,076	4,054,720
1946	38,371	441,679	26,166	—	31,769	537,985	3,626,165
1947	40,107	633,766	24,974	—	29,698	728,545	4,436,930
1948	61,799	619,598	25,251	—	34,613	741,261	4,836,028
1949	86,612	607,206	18,734	8,103	28,359	749,014	5,566,725
1950	101,930	696,582	16,592	18,186	25,606	858,896	7,011,306
1951	127,252	772,585	16,778	28,192	19,718	964,525	7,905,977
1952	138,845	757,025	18,113	33,540	24,380	971,903	7,774,815
1953p	125,932	741,446	18,700	35,872	24,700	946,650	7,356,595

Sulphur.—Sulphur production statistics include the sulphur content of pyrite shipped and the sulphur content of the sulphuric acid and sulphur dioxide made from smelter gases. For statistical purposes the elemental sulphur, recovered during the treatment of natural gas, is not included in the mining industry as it is considered that these treatment plants are more closely allied to the chemical industry.

In 1953 the producers of sulphur shipped 334,000 tons, 90,000 tons fewer than in 1952; in the earlier year there were large shipments of pyrite from stockpiled production of previous years.

18.—Quantity and Value of Sulphur Produced, 1944-53

Note.—Figures for 1926-43 are given in the 1946 Year Book, p. 355.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1944	248,088	1,755,739	1949	261,871	2,039,384
1945	250,114	1,881,321	1950	301,172	2,189,660
1946	234,771	1,784,666	1951	371,790	3,120,785
1947	221,781	1,822,867	1952	423,788	3,851,183
1948	229,463	1,836,358	1953p	333,873	3,127,464

Subsection 5.—Production of Fuels*

Coal.—Coal mining continues to be affected adversely by the substitution of fuel oil, natural gas and electricity for heating and power purposes. Output dropped off in 1953 for the third successive year, amounting to 15,900,000 tons compared with 17,500,000 in 1952. There were declines in all producing provinces but the principal loss was in Alberta where output dropped to 5,900,000 tons from 7,200,000 tons in 1952. Output in Nova Scotia was 5,800,000 tons against 5,900,000 in the preceding year and there was a slight decrease in Saskatchewan's production.

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* Information on the coal reserves of Canada is given in the 1950 Year Book, pp. 516-518.

19.—Coal Production, by Province, 1944-53

Note.—Figures for 1874-1910 are given in the 1911 Year Book, p. 419; for 1911-28 in the 1939 edition, p. 348; and for 1929-43 in the 1946 edition, p. 347.

Year	Nova Scotia	New Brunswick	Saskatchewan	Alberta	British Columbia	Yukon Territory	Canada	
	tons	tons	tons	tons	tons	tons	tons	$
1944	5,745,671	345,123	1,372,766	7,428,708	2,134,231	—	17,026,499	70,433,169
1945	5,112,615	361,184	1,532,995	7,800,151	1,699,768	—	16,506,713	67,588,402
1946	5,452,898	366,735	1,523,786	8,826,239	1,636,792	—	17,806,450	75,361,481
1947	4,118,196	345,194	1,571,147	8,070,430	1,763,899	—	15,868,866	77,475,017
1948	6,430,991	522,136	1,589,172	8,123,255	1,780,334	3,801	18,449,689	106,684,008
1949	6,181,779	540,806	1,870,487	8,616,855	1,906,963	3,153	19,120,043	110,915,121
1950	6,478,405	607,116	2,203,223	8,116,220	1,730,445	3,703	19,139,112	110,140,399
1951	6,307,629	653,439	2,223,318	7,659,329	1,739,412	3,696	18,586,823	109,038,855
1952	5,905,265	742,823	2,083,465	7,194,757	1,644,250	8,442	17,579,002	111,026,149
1953	5,787,026	721,252	2,021,304	5,917,474	1,443,006	10,611	15,900,673	102,721,875

20.—Imports of Anthracite, Bituminous and Lignite Coal, 1944-53

NOTE.—Figures for 1868-1910 are given in the 1911 Year Book, p. 420; for 1911-28 in the 1939 edition, p. 349; and for 1929-43 in the 1946 edition, p. 348.

Year	Anthracite[1]		Bituminous[2]		Lignite		Totals[2,3]	
	tons	$	tons	$	tons	$	tons	$
1944.......	4,452,991	33,417,990	24,270,692	79,718,988	171	1,038	28,723,854	113,138,016
1945.......	3,412,739	27,568,369	21,648,350	74,861,376	467	2,229	25,061,556[3]	102,431,974
1946.......	4,631,387	41,987,460	21,475,040	78,366,184	172	776	26,106,599[3]	120,354,420
1947.......	4,281,682	41,012,759	24,610,045	97,935,771	203	1,255	28,891,930[3]	138,949,785
1948.......	5,244,837	56,380,098	25,614,443	129,929,580	14,632	78,073	30,873,912[3]	186,387,751
1949.......	3,945,135	45,656,328	18,233,528	95,403,106	16,547	89,629	22,195,210[3]	141,149,063
1950.......	4,286,383	54,285,320	22,660,969	120,443,963	7,471	34,848	26,954,823[3]	174,764,131
1951.......	3,853,431	51,244,639	22,938,824	116,802,323	9,150	42,486	26,801,405[3]	168,089,448
1952.......	3,894,863	49,430,308	21,030,503	101,203,443	7,487	33,403	24,932,853[3]	150,667,154
1953.......	2,989,054	40,088,265	20,273,425	96,464,453	3,062	14,735	23,265,541[3]	136,567,453

[1] Includes anthracite dust. [2] Includes coal ex-warehoused for ships' stores. [3] Canada also imported 142,435 tons of briquettes of coal or coke valued at $1,114,617 in 1945, 182,231 tons valued at $1,449,221 in 1946, 245,678 tons valued at $2,233,654 in 1947, 308,753 tons valued at $3,204,839 in 1948, 186,971 tons valued at $2,185,707 in 1949, 191,134 tons valued at $2,316,570 in 1950, 170,157 tons valued at $2,061,798 in 1951, 155,597 tons valued at $1,868,619 in 1952, and 128,673 tons valued at $1,601,376 in 1953.

21.—Exports of Domestic Coal, 1944-53

NOTE.—Figures for 1868-1910 are given in the 1911 Year Book, p. 421; for 1911-28 in the 1939 edition, p. 349; and for 1929-43 in the 1946 edition, p. 348.

Year	Quantity	Value	Year	Quantity	Value
	tons	$		tons	$
1944......................	1,010,240	5,984,827	1949......................	432,043	3,563,892
1945......................	840,708	5,303,543	1950......................	394,961	3,198,040
1946......................	862,489	5,946,224	1951......................	435,083	3,495,664
1947......................	714,549	5,440,788	1952......................	388,960	3,203,522
1948......................	1,273,262	11,555,985	1953......................	255,274	1,999,908

The sources of coal consumed in Canada in the years 1944-53 are shown in Table **22** and detailed figures of coal made available for consumption in 1952 and 1953 are given in Table **23**; the difference between the totals of the two tables in the same year is accounted for by the fact that coal received may be held in bond at Canadian ports and not cleared for consumption until required, while coal received in previous years may be taken out of bond (cleared for consumption) in a later year. Normally, the coal made available for consumption is greater than the apparent domestic consumption, as coal is landed at Canadian ports and re-exported or ex-warehoused for ships' stores without being taken out of bond but, while remaining in bond at the port, it is available for domestic consumption if required.

22.—Consumption of Canadian and Imported Coal in Canada, 1944-53

NOTE.—Figures for 1886–1910 are given in the 1921 Year Book, p. 354; for 1911–28 in the 1939 edition, p. 350; and for 1929–43 in the 1946 edition, p. 349.

Year	Canadian Coal[1]		Imported Coal 'Entered for Consumption'				Grand Total	Consumption Per Capita[3]
			From United States	From United Kingdom	Total[2]			
	tons	p.c.	tons	tons	tons	p.c.	tons	tons
1944..........	15,660,808	35·7	27,948,008	218,511	28,166,201	64·3	43,827,009	3·68
1945..........	15,227,819	38·3	24,505,241	28,388	24,521,528	61·7	39,749,347	3·29
1946..........	16,502,508	39·0	25,639,541	101,580	25,740,704	61·0	42,243,212	3·45
1947..........	14,673,967	34·0	28,410,149	52,777	28,462,242	66·0	43,136,209	3·45
1948..........	16,928,028	36·0	30,295,841	162,550	30,454,917	64·0	47,382,945	3·70
1949..........	18,104,626	45·3	21,501,583	331,457	21,833,057	54·7	39,937,683	2·97
1950..........	18,224,944	40·6	26,224,893	423,874	26,649,049	59·4	44,873,993	3·27
1951..........	17,571,154	39·8	26,232,211	291,656	26,523,921	60·2	44,095,075	2·92
1952..........	16,749,416	40·5	24,248,804	356,032	24,603,789	59·5	41,353,205	2·87
1953..........	15,240,105	40·0	22,548,793	352,383	22,900,392	60·0	38,140,497	2·58

[1] The sum of Canadian coal mines' sales, colliery consumption, coal supplied to employees and coal used in making coke, etc., less the tonnage of coal exported. [2] Includes small tonnages from countries other than the United Kingdom and the United States. Deductions have been made from this column to take account of foreign coal re-exported from Canada and bituminous coal ex-warehoused for ships' stores. [3] Figures based on estimates of population given at p. 137.

23.—Coal Made Available for Consumption in Canada, 1952 and 1953

NOTE.—For details by provinces, *see* DBS annual report, *The Coal Mining Industry.*

Grade	Canadian Coal				Coal Imported[1]		Coal Made Available for Consumption	
	Produced		Exported					
	1952	1953	1952	1953	1952	1953	1952	1953
	tons	tons	tons	tons	tons	tons	tons	tons
Anthracite........	—	—	—	—	3,732,973	2,931,599	3,732,973	2,931,599
Bituminous.......	12,679,402	11,479,395	246,144	184,511	20,697,298	19,485,972	33,130,556	30,780,856
Subbituminous....	2,816,135	2,399,974	133	91	—	—	2,816,002	2,399,883
Lignite............	2,083,465	2,021,304	515	454	—	—	2,082,950	2,020,850
Totals..........	**17,579,002**	**15,900,673**	**246,792**	**185,056**	**24,430,271**	**22,417,571**	**41,762,481**	**38,133,188**

[1] Coal reaching Canadian ports whether or not it is cleared through customs, exclusive of 104,553 tons of imported briquettes in 1952, and 104,216 tons in 1953.

Petroleum.—A special article on the Canadian crude petroleum situation up to the end of 1951 is given in the 1952-53 Year Book, pp. 524-527. That information is brought up to the end of 1952 in the 1954 Year Book, pp. 540-544, and to June 1954 in the survey at pp. 492-494 of this volume, and a special article on oil and gas pipelines in Canada is included in the Transportation Chapter.

In 1953, Canadian crude oil production totalled 81,311,531 bbl., an increase of 32·8 p.c. over the 1952 production of 61,237,322 bbl. Western Canada accounted for 99 p.c. of the total and Alberta yielded 77,065,000 bbl. or 95 p.c. There was an increase in Saskatchewan in 1953 with a yield of 3,000,000 bbl., and Manitoba, which had no production previous to 1951, showed a yield of 619,321 bbl.

24.—Quantity and Value of Crude Petroleum Produced, by Province, 1944-53

NOTE.—Figures for 1936–43 are given in the 1948–49 Year Book, p. 476.

Year	New Brunswick	Ontario	Saskatchewan	Alberta	Northwest Territories	Canada
	QUANTITY					
	bbl.	bbl.	bbl.	bbl.	bbl.	bbl.
1944	23,296	125,067	—	8,727,366	1,223,675	10,099,404
1945	30,140	113,325	14,374	7,979,786	345,171	8,482,796
1946	28,584	123,082	118,686	7,137,921	177,282	7,585,555
1947	23,129	131,295	540,117	6,770,477	227,474	7,692,492
1948	21,372	176,989	849,166	10,888,592	350,541	12,286,660
1949	19,544	260,670	782,188	20,087,418	155,528	21,305,348
1950	17,137	250,655	1,041,098	27,548,169	186,729	29,043,788
1951	15,551	197,171	1,249,281	45,915,384	227,449	47,615,534[1]
1952	14,237	191,814	1,696,505	58,915,723	314,217	61,237,322[2]
1953p	14,500	298,710	3,000,000	77,065,000	314,000	81,311,531[3]
	VALUE					
	$	$	$	$	$	$
1944	32,832	296,420	—	14,468,061	632,587	15,429,900
1945	42,413	268,478	15,362	13,169,692	136,303	13,632,248
1946	40,018	291,719	135,990	14,347,933	173,392	14,989,052
1947	32,381	350,000	614,156	18,078,907	500,238	19,575,682
1948	29,920	608,109	976,541	35,127,751	676,574	37,418,895
1949	27,362	901,143	836,941	58,999,936	353,108	61,118,490
1950	23,992	892,000	1,134,797	82,216,492	352,656	84,619,937
1951	21,771	677,905	1,659,045	113,870,152	399,887	116,655,238[1]
1952	19,932	641,037	2,256,352	139,512,432	379,160	143,038,212[2]
1953p	20,300	997,691	4,300,000	190,890,000	376,800	198,111,542[3]

[1] Includes 10,698 bbl. valued at $26,478 produced in Manitoba. [2] Includes 104,826 bbl. valued at $229,299 produced in Manitoba. [3] Includes 619,321 bbl. valued at $1,526,751 produced in Manitoba.

Natural Gas Production.—Alberta accounts for almost 90 p.c. of Canada's production of natural gas. It is estimated that the total output for all provinces was almost 100,000,000,000 cu. feet in 1953 of which 88,000,000,000 cu. feet was from Alberta's wells. Ontario's production amounted to over 10,000,000,000 cu. feet in 1953. (*See also* the survey of the petroleum and natural gas industry up to June, 1954, pp. 492-494, and the article on the construction of pipelines in Canada, Chapter XIX.)

25.—Quantities of Natural Gas Produced, by Province, 1944-53

NOTE.—Figures for 1920–28 are given in the 1940 Year Book, p. 347, and for 1929–43 in the 1946 edition, p. 350.

Year	New Brunswick	Ontario	Saskatchewan	Alberta	Northwest Territories	Canada	
	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	M cu. ft.	$
1944	702,464	7,082,508	119,116	37,161,570	1,500	45,067,158	11,422,541
1945	653,230	7,199,970	163,824	40,393,061	1,500	48,411,585	12,309,564
1946	541,010	7,051,309	209,569	40,097,096	1,500	47,900,484	12,165,050
1947	489,810	7,785,921	274,193	44,106,643	—	52,656,567	13,429,558
1948	420,352	8,590,429	477,271	48,965,217	150,000	58,603,269	15,632,507
1949	375,035	8,024,213	812,916	51,179,779	65,234	60,457,177	11,620,302
1950	361,877	8,009,488	813,554	58,603,976	33,335	67,822,230	6,433,041
1951	261,579	8,442,842	860,082	69,876,831	19,333	79,460,667	7,158,920
1952	202,042	8,302,190	1,007,491	79,149,895	24,847	88,686,465	9,517,638
1953p	176,000	10,430,000	1,139,189	87,858,000	25,000	99,628,189	11,023,350

Subsection 6.—Production of Structural Materials

Production of structural materials is dependent upon the activity of the construction industry; output in 1953 reached a record value of $183,605,851. This group includes clay and clay products (brick, drain tile, sewer pipe, etc.), cement, lime, sand, gravel and stone.

26.—Value of Structural Materials Produced, by Province, 1944-53

NOTE.—Figures for 1926–43 are given in the 1946 Year Book, p. 355.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
	$	$	$	$	$	$	$	$	$	$
1944	...	1,081,805	1,637,409	14,597,540	15,716,361	2,546,722	864,082	3,044,236	3,496,782	42,984,937
1945	...	1,310,214	1,489,210	17,051,353	17,437,552	3,212,917	834,564	3,305,941	3,777,922	48,419,673
1946	...	1,671,504	1,817,401	22,615,910	24,293,081	4,235,389	1,322,107	4,765,108	5,399,721	66,120,221
1947	...	2,724,003	2,397,433	29,236,137	30,447,055	4,772,908	1,632,625	4,726,752	8,639,872	84,576,785
1948	...	3,419,820	2,456,778	39,415,625	35,208,061	6,050,453	1,426,836	7,089,427	10,060,246	105,127,246
1949	1,683,483	3,445,872	2,508,033	38,735,128	40,755,195	5,791,820	2,341,354	6,963,395	11,678,799	113,903,079
1950	1,619,068	3,370,622	7,597,036	42,586,473	49,701,917	6,507,817	2,021,376	8,377,256	10,514,647	132,296,212
1951	1,490,381	3,476,399	4,029,324	51,450,113	60,202,877	7,487,168	2,490,726	9,322,492	11,384,311	151,333,791
1952	2,283,326	3,350,941	4,856,861	57,566,708	66,581,698	7,903,121	2,369,697	10,828,838	13,067,428	168,808,618
1953p	2,844,318	3,207,654	5,295,574	57,503,462	73,464,843	8,506,680	2,706,195	15,972,006	14,105,119	183,605,851

Clay Products.—The sales value of clay products produced in 1953 was the highest recorded. Increases were shown in all provinces except New Brunswick and Manitoba. Common clays suitable for the production of building bricks and tile are found in all the provinces; production is greatest in Ontario and Quebec. Stoneware clays are produced largely from the Eastend and Willows areas in Saskatchewan and shipped to Medicine Hat, Alta., where, utilizing the cheap gas fuel, they are manufactured into stoneware, sewer pipe, pottery, tableware, etc. Stoneware clay also occurs in Nova Scotia and, although it has not been developed extensively for ceramic use, some is used for pottery. Two large plants and a few small plants manufacture fireclay refractories from domestic clay in British Columbia, Saskatchewan and Nova Scotia. Deposits of high-grade, plastic, white burning clays occur in northern Ontario and deposits yielding high-grade china clay have been found along the Fraser River in British Columbia but these have not been used on a commercial scale. Ball clays of high bond strength occurring in the white mud beds of southern Saskatchewan have not been developed to any extent.

27.—Value (Total Sales) of Clay Products Produced, by Province, 1944-53

Note.—Figures for 1926-43 are given in the 1946 Year Book, p. 356.

Year	Newfoundland	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
	$	$	$	$	$	$	$	$	$	$
1944	...	402,694	207,051	1,881,791	2,347,396	197,383	330,907	1,143,577	486,626	6,997,425
1945	...	433,455	232,783	2,534,630	3,107,189	269,917	271,288	1,401,875	661,955	8,913,092
1946	...	671,466	336,971	3,457,168	4,288,780	372,920	411,446	1,808,971	859,645	12,207,367
1947	...	752,126	381,184	4,257,423	5,289,528	392,518	495,016	1,771,250	1,147,144	14,486,189
1948	...	1,031,685	434,772	5,123,908	6,563,754	517,181	509,593	2,055,738	1,392,417	17,629,048
1949	25,450	1,053,845	515,767	5,580,421	7,435,439	514,705	545,588	1,603,199	707,295	17,981,709
1950	31,089	1,126,969	681,139	6,324,387	9,323,263	690,730	581,506	1,950,309	1,081,496	21,790,888
1951	32,183	1,202,428	740,861	6,776,430	10,484,341	673,698	616,655	1,787,731	1,213,329	23,527,656
1952	29,285	1,221,893	655,084	6,645,387	11,975,200	575,088	711,778	1,964,618	1,183,195	24,961,528
1953p	34,000	1,258,200	651,960	8,056,150	14,396,843	565,804	726,000	2,042,356	1,488,970	29,220,283

Cement.—The production of cement has almost doubled since 1946 and imports have also been relatively high during the same period. The largest production is in Quebec and Ontario although there are active plants in most of the provinces.

28.—Quantity and Value of Production, Imports, Exports and Apparent Consumption of Portland Cement, 1944-53

Note.—Figures for 1910-28 are given in the 1939 Year Book, p. 356, and for 1929-43 in the 1946 edition, p. 356.

Year	Production[1]		Imports		Exports		Apparent Consumption	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	bbl.[2]	$	bbl.[2]	$	bbl.[2]	$	bbl.[2]	$
1944	7,190,851	11,621,372	14,004	76,838	210,449	377,434	6,994,406	11,320,776
1945	8,471,679	14,246,480	32,653	141,539	281,944	535,012	8,222,388	13,853,007
1946	11,560,483	20,122,503	350,057	1,098,532	114,370	236,276	11,796,170	20,984,759
1947	11,936,245	21,968,909	1,248,625	3,843,652	88,030	198,354	13,096,840	25,614,207
1948	14,127,123	28,264,987	1,120,671	3,995,173	72,999	200,575	15,174,795	32,059,585
1949	15,916,564	32,901,936	2,284,001	6,877,939	19,212	51,733	18,181,353	39,728,142
1950	16,741,826	35,894,124	1,386,219	3,788,981	23,909	111,351	18,104,136	39,571,754
1951	17,007,812	40,446,288	2,327,431	7,447,859	2,590	12,386	19,332,653	47,881,761
1952	18,520,538	48,059,470	2,913,981	9,068,181	4,306	20,686	21,430,214	57,106,955
1953p	22,577,141	59,839,705	2,482,783	7,403,158	14,728	77,559	25,045,196	67,165,304

[1] 'Production' as used here means quantity and value of sales.

[2] The barrel of cement equals 350 lb.

Sand, Gravel and Stone.—Deposits of sand and gravel are numerous throughout Eastern Canada, with the exception of Prince Edward Island where gravels are scarce. The local needs for these materials are usually supplied from the nearest deposits as their cost to the consumer is governed largely by the length of the haul. This accounts for the large number of small pits and the small number of large plants. Every province, except New Brunswick and Prince Edward Island, produces natural bonded sand but some grades particularly suitable for certain industries demand a much higher price than ordinary sand. Quebec and Ontario contributed 73 p.c. of the total quantity of sand and gravel in 1952. The greater part of the output is used in road improvement, concrete works and railway ballast, and most of the commercial plants are equipped for producing crushed gravel, a product that can compete with crushed stone.

The stone industry has two main divisions, stone quarrying and the stone-products industry. The granite, limestone, marble, sandstone and slate quarries of Canada yield high-grade structural and decorative materials and also supply requirements for chemical and other allied industries. The gross value of stone of all varieties produced in Canada in 1952, totalled $30,835,356 as compared with $28,649,768 in 1951.

29.—Quantity and Value of Sand, Sand and Gravel, and Stone Produced, 1951-53

Material and Purpose	1951		1952		1953	
	Quantity	Gross Value	Quantity	Gross Value	Quantity	Gross Value
	tons	$	tons	$	tons	$
Sand—						
Moulding sand	36,421	86,900	23,434	65,625	20,675	61,222
For building, concrete, roads, etc	7,972,740	5,116,901	8,069,333	5,743,760	8,619,698	6,683,894
Other	365,635	162,189	712,224	389,606	506,765	248,622
Sand and Gravel—						
For railway ballast	6,991,189	2,291,532	7,122,550	2,403,865	8,436,245	3,032,939
For concrete, roads, etc	62,305,240	27,941,202	68,157,943	31,125,978	66,125,694	32,228,212
For mine filling	3,412,226	950,941	3,898,609	1,159,186	3,007,909	1,074,757
Crushed gravel	11,889,370	8,077,894	14,911,452	10,451,023	14,316,963	10,155,755
Totals, Sand and Gravel	**92,972,821**	**44,627,559**	**102,895,545**	**51,339,043**	**101,033,949**	**53,485,401**
Stone—						
Building	124,185	4,575,321	109,205	4,229,790	118,233	4,270,095
Monumental and ornamental	14,116	1,086,159	11,948	1,045,429	16,398	974,757
Limestone for agriculture	571,018	1,368,320	466,817	1,203,345	515,223	1,251,850
Chemical Uses—						
Flux	1,038,650	1,411,501	1,221,345	1,651,115	1,401,808	1,703,846
Pulp and paper	464,773	1,158,099	456,522	1,310,368	408,969	1,158,977
Other	29,279	54,011	56,945	88,140	81,628	121,101
Rubble and riprap	1,600,180	2,123,705	1,977,855	2,435,767	1,199,162	1,873,574
Crushed	14,592,830	16,518,445	14,066,426	17,497,862	15,776,593	17,693,179
Totals, Stone[1]	**18,676,706**	**28,649,768**	**18,726,196**	**30,835,356**	**19,849,017**	**30,613,051**

[1] Includes minor items not specified.

Section 5.—Industrial Statistics of the Mineral Industry

The scope of the annual statistics on mineral production published by the Dominion Bureau of Statistics includes a general review of the principal mineral industries, such as the copper-gold, silver-lead-zinc, and nickel-copper industries, as well as a section on metallurgical works. Additional data published at irregular intervals include such features as numbers of employees, wages and salaries paid and net value of sales.

The figures for 'net value of shipments' of industries given in Tables **30** and **31** are, in each table, the settlements received for shipments by producers and the additional values obtained when the smelting of ores is completed in Canada, less the cost of materials, fuel, etc. The totals indicate more nearly the actual returns to the different industries than do the values for the minerals in Table **2** of this Chapter where, with respect to copper, lead, zinc and silver, values are computed by applying the average prices for the year in the principal metal markets to the total production from mines and smelters with no reduction for fuel, electricity and other supplies consumed in the production process. Some imported ores and concentrates are treated in Canadian non-ferrous smelting and refining works, especially in the production of aluminum, where imported ore only is used, and of cobalt which comes mainly from African ores. The net sales of these plants include, therefore, the net value of the metals recovered from these imported ores and, to this extent, the net sales shown in Tables **30** and **31** include products of other than Canadian origin.

30.—Summary Statistics of the Mineral Industry, by Province, 1952

Province or Territory	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Newfoundland	783	4,585	13,835,288	9,161,361	20,900,527
Nova Scotia	621	13,578	40,857,352	13,583,087	51,711,623
New Brunswick	379	1,596	4,096,170	2,311,389	9,165,221
Quebec	4,867	33,010	108,515,942	288,929,982	299,378,307
Ontario	6,870	44,172	154,267,119	256,779,927	360,214,198
Manitoba	274	3,336	12,946,522	17,040,774	16,986,904
Saskatchewan	761	2,113	8,024,308	29,835,969	40,505,709
Alberta	4,387	12,107	39,677,562	13,366,664	177,256,475
British Columbia	956	17,820	62,223,703	174,312,254	121,282,853
Northwest Territories	37	959	4,106,791	2,092,059	6,736,867
Yukon Territory	24	840	4,425,394	3,037,582	8,315,635
Canada	**19,958**	**134,116**	**452,976,151**	**810,451,048**	**1,112,454,319**

[1] Includes freight and smelter charges and cost of ores treated.

[2] Gross value of shipments less cost of process supplies, fuel, electricity, freight and smelter charges.

A summary of the industrial statistics of the principal mineral industries operating in Canada in the years 1948 to 1952 is presented in Table **31**.

31.—Summary Statistics of the Principal Mineral Industries, 1948-52

Industry and Year	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Metallics					
Alluvial gold 1948	47	495	1,603,065	483,149	2,286,413
1949	56	398	1,509,423	579,533	2,920,290
1950	58	411	1,598,875	532,348	3,612,183
1951	47	362	1,553,103	621,174	2,951,342
1952	39	361	1,638,672	518,778	2,662,952
Auriferous quartz 1948	282	22,566	59,515,678	28,277,570	80,386,512
1949	247	22,358	61,293,334	32,970,157	96,580,304
1950	281	22,491	64,533,114	35,204,245	108,840,362
1951	211	22,126	68,739,531	36,643,949	100,059,503
1952	216	20,757	69,004,828	34,912,550	100,083,506
Copper-gold-silver 1948	37	6,401	17,919,526	22,178,942	85,652,206
1949	33	7,395	21,776,150	31,402,838	74,591,660
1950	56	7,554	23,489,366	38,671,894	83,181,924
1951	82	6,223	21,545,660	30,830,233	92,331,995
1952	98	7,210	26,711,225	34,998,574	80,668,817
Silver-cobalt 1948	17	172	413,095	177,653	321,415
1949	18	264	607,782	319,309	503,572
1950	20	364	883,281	631,933	2,308,213
1951	22	514	1,406,783	899,494	3,640,348
1952	19	696	2,161,894	1,213,660	3,556,975
Silver-lead-zinc 1948	84	4,040	11,421,086	22,923,228	85,993,977
1949	111	5,438	15,676,043	33,241,764	67,108,165
1950	112	5,939	17,632,755	36,872,621	85,845,870
1951	168	9,324	30,380,859	53,783,766	131,909,215
1952	177	10,331	37,643,614	60,189,782	104,937,002
Nickel-copper 1948	15	6,920	20,492,920	5,976,740	50,976,280
1949	11	7,053	22,517,855	6,981,288	45,963,772
1950	10	7,713	25,313,838	7,914,476	46,028,054
1951	11	9,831	34,974,971	10,182,069	54,170,666
1952	22	10,820	42,151,955	12,046,000	59,694,630
Miscellaneous metals 1948	26	1,296	3,878,527	4,100,667	4,624,994
1949	21	3,275	8,894,642	5,776,330	15,689,997
1950	16	3,225	8,578,969	8,538,649	15,108,311
1951	31	3,891	12,251,755	9,708,893	21,765,843
1952	47	5,163	18,370,772	14,119,614	25,523,464
Smelting and refining 1948	16	19,701	52,276,837	429,553,076	146,830,891
1949	16	19,150	55,133,065	417,280,288	181,907,847
1950	17	19,863	58,748,362	447,171,025	202,711,781
1951	17	22,814	75,474,505	598,343,141	262,972,789
1952	18	24,608	87,964,295	570,352,683	266,721,382
Totals, Metallics 1948	**524**	**61,591**	**167,520,734**	**513,671,025**	**457,072,688**
1949	**513**	**65,331**	**187,408,294**	**528,551,507**	**485,265,607**
1950	**570**	**67,560**	**200,778,560**	**575,537,191**	**547,636,698**
1951	**589**	**75,085**	**246,327,167**	**741,012,719**	**669,801,701**
1952	**636**	**79,946**	**285,647,255**	**728,351,641**	**643,848,728**

For footnotes, *see* end of table, p. 538.

31.—Summary Statistics of the Principal Mineral Industries, 1948-52—continued

Industry and Year	Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
	No.	No.	$	$	$
Non-metallics (excluding Fuels)					
Asbestos.........1948	15	4,959	12,136,615	7,856,902	34,421,819
1949	17	4,053	10,569,071	6,168,308	33,616,343
1950	19	5,552	15,848,829	10,267,587	55,640,809
1951	24	5,923	20,024,208	13,073,794	68,550,215
1952	23	6,318	23,625,431	13,137,225	76,158,201
Feldspar, quartz and nepheline syenite.........1948	36	562	1,184,257	666,906	2,598,159
1949	31	442	946,268	465,253	2,184,782
1950	36	476	1,056,129	467,968	2,553,587
1951	33	532	1,402,294	741,571	3,184,952
1952	34	426	1,251,943	660,344	3,044,081
Gypsum.........1948	14	995	2,272,358	1,871,868	3,771,013
1949	14	925	2,226,703	1,481,874	3,943,171
1950	13	1,004	2,412,698	1,775,427	4,935,137
1951	13	1,018	2,648,803	2,160,584	3,720,962
1952	14	1,061	2,979,091	2,361,683	4,176,391
Iron oxides.........1948	7	55	84,559	38,265	165,126
1949	8	44	73,111	40,406	167,481
1950	6	44	70,404	37,360	225,272
1951	5	43	87,283	42,425	219,852
1952	4	45	93,423	41,867	153,055
Mica.........1948	34	109	118,982	32,850	187,098
1949	34	96	115,667	20,516	87,942
1950	26	100	136,727	47,388	205,223
1951	31	138	182,033	32,728	414,922
1952	28	115	168,176	34,814	159,292
Peat (moss and fuel).........1948	41	1,032	1,532,977	810,071	2,597,754
1949	43	1,129	1,510,105	700,260	2,287,072
1950	39	1,118	1,530,866	767,110	2,101,092
1951	37	859	1,247,619	831,434	2,318,010
1952	36	1,042	1,601,825	932,940	2,324,417
Salt.........1948	11	673	1,367,353	2,062,682	3,765,785
1949	12	698	1,565,210	1,904,760	4,716,723
1950	13	643	1,521,593	2,180,610	5,919,503
1951	12	689	1,633,222	2,569,376	6,631,889
1952	12	651	1,907,219	3,060,246	5,995,833
Talc and soapstone.........1948	5	58	102,087	29,250	280,573
1949	3	59	105,786	64,252	256,541
1950	6	58	116,547	66,775	297,860
1951	3	50	109,522	62,955	242,383
1952	3	54	117,144	74,194	228,924
Miscellaneous[3].........1948	40	1,161	2,497,918	1,977,985	4,056,367
1949	37	1,160	2,632,808	1,774,881	4,461,930
1950	42	1,121	2,640,013	1,888,255	4,821,324
1951	39	1,359	3,699,789	2,704,474	6,209,886
1952	42	1,535	4,257,845	2,619,353	6,679,777
Totals, Non-metallics.........1948	**203**	**9,604**	**21,297,106**	**15,346,779**	**51,843,694**
1949	**199**	**8,606**	**19,744,679**	**12,620,510**	**51,721,985**
1950	**200**	**10,116**	**25,333,806**	**17,498,480**	**76,699,807**
1951	**197**	**10,611**	**31,034,773**	**22,219,341**	**91,493,071**
1952	**196**	**11,247**	**36,002,097**	**22,922,666**	**98,919,971**
Fuels					
Coal.........1948	351	24,319	58,503,607	16,226,321	85,624,145
1949	328	24,230	61,204,632	15,496,981	95,418,140
1950	363	23,418	60,938,980	14,464,916	95,675,483
1951	315	22,647	63,127,966	16,547,467	92,491,368
1952	271	21,754	66,028,224	18,959,228	92,066,921

For footnotes, *see* end of table, p. 538.

31.—Summary Statistics of the Principal Mineral Industries, 1948-52—concluded

Industry and Year		Plants or Mines	Employees	Salaries and Wages	Purchased Fuel, Electricity and Process Supplies[1]	Net Value of Shipments[2]
		No.	No.	$	$	$
Fuels—concluded						
Natural gas	1948	3,833	1,831	2,918,941	67,065	14,622,672
	1949	3,927	2,223	4,713,266	63,512	17,519,000
	1950	3,991	2,618	5,703,524	186,180	6,258,035
	1951	3,985	2,658	6,491,234	174,884	6,516,339
	1952	4,132	2,573	7,296,092	336,666	5,517,385
Petroleum	1948	2,581	1,641	4,391,929	2,052,808	35,336,167
	1949	3,166	2,142	6,304,601	985,707	60,105,421
	1950	3,849	2,417	7,848,539	1,714,101	82,881,844
	1951	4,761	3,185	11,518,781	3,210,493	113,155,236
	1952	5,833	3,702	14,610,821	4,413,948	135,182,903
Totals, Fuels	**1948**	**6,765**	**27,791**	**65,814,477**	**18,346,194**	**135,582,984**
	1949	**7,421**	**28,595**	**72,222,499**	**16,546,200**	**173,042,561**
	1950	**8,203**	**28,453**	**74,491,043**	**16,365,197**	**184,815,362**
	1951	**9,061**	**28,490**	**81,137,981**	**19,932,844**	**212,162,943**
	1952	**10,236**	**28,029**	**87,935,137**	**23,709,842**	**232,767,209**
Structural Materials						
Clay products	1948	117	3,746	7,505,765	4,026,603	13,602,445
	1949	124	3,603	7,924,841	3,904,967	14,076,742
	1950	134	3,663	8,583,912	4,655,254	17,135,634
	1951	129	3,737	9,731,657	5,208,555	18,319,101
	1952	133	3,568	9,812,214	5,116,848	19,844,680
Cement	1948	8	1,723	4,356,086	12,857,198	17,704,519
	1949	8	1,721	4,754,611	13,987,830	21,077,322
	1950	8	1,781	5,235,735	15,109,409	23,091,104
	1951	10	1,931	6,242,900	16,392,344	26,631,501
	1952	11	2,239	7,849,057	18,365,676	32,664,254
Lime	1948	42	1,121	2,459,299	3,790,233	7,284,638
	1949	42	1,060	2,485,601	3,572,730	8,223,272
	1950	43	1,133	2,760,960	4,052,688	8,774,233
	1951	44	1,096	3,053,802	4,279,967	10,390,230
	1952	42	1,005	3,145,246	4,435,054	9,784,399
Sand and gravel	1948	6,102	4,197	7,057,193	1,101,024	29,528,572
	1949	6,952	3,863	7,491,081	1,500,164	29,681,377
	1950	7,348	4,120	8,712,440	1,907,445	34,527,314
	1951	7,591	4,060	10,414,559	2,309,809	42,317,750
	1952	8,210	4,185	12,354,505	2,673,245	48,665,798
Stone	1948	554	3,082	5,990,922	2,617,663	15,330,890
	1949	549	3,728	7,615,572	3,399,603	17,128,470
	1950	589	3,562	7,548,241	3,614,585	22,280,772
	1951	536	3,861	9,218,694	4,677,322	23,972,446
	1952	493	3,897	10,230,640	4,876,076	25,959,280
Totals, Structural Materials	**1948**	**6,823**	**13,869**	**27,369,265**	**24,392,721**	**83,451,064**
	1949	**7,675**	**13,975**	**30,271,706**	**26,365,294**	**90,187,183**
	1950	**8,122**	**14,259**	**32,841,288**	**29,339,381**	**105,809,057**
	1951	**8,310**	**14,685**	**38,661,612**	**32,867,997**	**121,631,028**
	1952	**8,889**	**14,894**	**43,391,662**	**35,466,899**	**136,918,411**
Grand Totals	**1948**	**14,315**	**112,855**	**282,001,582**	**571,756,719**	**727,950,430**
	1949	**15,808**	**116,507**	**309,647,178**	**584,083,511**	**800,217,336**
	1950	**17,095**	**120,388**	**333,444,697**	**638,740,249**	**914,960,924**
	1951	**18,157**	**128,871**	**397,161,533**	**816,032,901**	**1,095,088,743**
	1952	**19,957**	**134,116**	**452,976,151**	**810,451,048**	**1,112,454,319**

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[1] Includes freight and smelter charges and cost of ores treated.

[2] Gross value of shipments less cost of process supplies, fuel, electricity, freight and smelter charges.

[3] Includes natural abrasives.

Section 6.—World Production of Certain Metallic Minerals and Fuels

Table **32** shows the production of certain metallic minerals and fuels in the different countries of the world for the year 1952. These figures are taken from the United Nations *Statistical Yearbook 1953,* which presents production figures for 1933-52 for a much more extensive list of mining and quarrying industries. The 1952 figures are provisional and have been converted from kilograms to ounces troy for gold and from metric tons to short tons for the other metals and fuels shown.

32.—World Production of Certain Metallic Minerals and Fuels, 1952p

NOTE.—Where dashes occur throughout this table they indicate that no figures were given in the United Nations *Statistical Yearbook,* either because there was no production or because the quantity was not available.

Country	Gold	Silver	Copper	Iron	Lead	Zinc	Coal	Crude Petroleum
	'000 oz. t.	'000 oz. t.	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Algeria	—	9·6[1]	—	1,803·4	4·6	12·7	296·5	51·0
Anglo-Egyptian Sudan	1·5[1]	—	—	—	—	—	—	—
Angola	—	—	0·4[1]	—	—	—	—	—
Argentina	8·0[1]	964·5	—	—	24·5	17·6	123·8	3,959·5
Australia	982·2	11,278·5	17·9	1,958·8	249·9	219·9	21,753·0	—
Austria	—	—	3·1	921·5	6·6	6·8	209·4	3,086·5
Bahrain	—	—	—	—	—	—	—	1,664·5
Bechuanaland	1·3	—	—	—	—	—	—	—
Belgian Congo	368·8	4,726·2	226·7[2]	—	—	108·6	278·9	—
Belgium	—	—	—	51·8	—	—	33,492·6	—
Bolivia	11·0[3,4]	7,073·2[3]	5·2[3]	—	33·1[3]	39·2[3]	—	74·7
Brazil	141·0	—	—	1,804·5[1]	—	—	2,161·6	108·1
British West Africa[5]	—	45·0[3]	—	—	—	—	—	—
Brunei	—	—	—	—	—	—	—	5,594·2
Bulgaria	—	—	—	—	—	—	360·5[6]	—
Burma	—	241·1	—	—	6·1	4·2	—	142·2
Cameroons, French	3·0	—	—	—	—	—	—	—
Canada	**4,471·9**	**25,177·2**	**257·7**	**2,861·6**[7]	**164·9**	**382·1**	**15,496·3**	**8,678·5**
Chile	176·0	1,247·4	446·1	1,535·5	4·4	—	2,664·3[8]	127·5
China[9]	107·5[10]	—	—	13·2[11]	—	—	12,300·7[11]	—
Colombia	422·2	122·2	—	—	—	—	460·8[12]	6,012·0
Cuba	—	—	19·7	—	—	—	—	1·6
Cyprus	—	—	22·4	—	—	—	—	—
Czechoslovakia	2·1[10]	1,543·2[6]	—	686·7	—	—	22,156·5	121·3
Ecuador	24·3	83·6	—	—	0·1	—	—	412·3
Egypt	15·2[1]	—	—	—	—	—	—	2,592·6
El Salvador	26·9	347·2	—	—	—	—	—	—
Eritrea	1·1[13]	—	—	—	—	—	—	—
Ethiopia	21·2[3]	—	—	—	—	—	—	—
Fiji	74·3	—	—	—	—	—	—	—
Finland	19·7	151·1	22·4	—	0·4	11·3	—	—
Formosa (Taiwan)	33·2	—	—	—	—	—	2,519·9	2·6
France	44·9	707·3[1]	0·7	14,583·6	13·8	16·1	61,029·4[14]	385·7
French Equatorial Africa	47·4	—	—	—	3·4	0·4	—	—
French West Africa	1·0	—	—	—	—	—	—	—
Germany (Western only)	1·4[15]	4,137·8[1]	2·6	4,516·2	56·9	89·0	135,890·7[14]	1,934·6
Gold Coast	691·5	[16]	—	—	—	—	—	—
Greece	—	209·0[1]	—	87·1	6·2	10·0	—	—
Guiana—								
British	22·2	—	—	—	—	—	—	—
French	7·2	—	—	—	—	—	—	—
Netherlands (Surinam)	6·1	—	—	—	—	—	—	—
Honduras	35·3[3]	4,604·0	—	—	0·6	—	—	—
Hong Kong	—	—	—	63·9	—	—	—	—
Hungary	2·0[10]	16·1[11]	—	110·2[1]	0·3[13]	—	1,763·7[1]	551·2
India[17]	252·9	19·3	10·4[1]	2,441·6	—	—	40,569·5	331·8[11]
Indochina	—	—	—	—	—	—	944·7	—
Indonesia	41·8[13]	—	—	—	—	—	1,057·1	9,395·0
Iran	—	—	—	—	—	—	187·4[18]	1,485·9
Iraq	—	—	—	—	—	—	—	19,412·8
Ireland	—	—	—	—	—	—	200·6	—

For footnotes, *see* end of table, p. 540.

32.—World Production of Certain Metallic Minerals and Fuels, 1952^{p}—concluded

Country	Gold	Silver	Copper	Iron	Lead	Zinc	Coal	Crude Petroleum
	'000 oz. t.	'000 oz. t.	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons
Italy	14·9	1,054·5	0·1	442·0	43·2	123·8	1,200·4	70·0
Japan	228·1	6,941·3	59·1	615·1	19·3	96·5	47,795·1	337·3
Kenya	10·2	—	—	—	—	—	—	—
Korea (South only)	15·7	6·4	0·7	11·0	0·2	0·6	634·9	—
Kuwait	—	—	—	—	—	—	—	41,481·1
Liberia	9·8[1,3]	—	—	504·9[19]	—	—	—	—
Luxembourg	—	—	—	2,396·4	—	—	—	—
Malaya, Federation of	15·6[1]	—	—	756·2	—	—	—	—
Manchuria	—	—	—	—	—	—	3,109·6[8,11]	—
Mexico	459·4	50,354·4	64·5	374·8	271·2	250·7	1,453·9	12,188·3
Morocco—								
French	—	1,360·0[1]	—	329·6	92·2	31·3	507·1	111·3
Spanish	—	—	—	630·5	0·4[3]	—	—	—
Mozambique	0·9[1]	—	—	—	—	—	126·8	—
Netherlands	—	—	—	—	—	—	13,814·2	788·3
New Guinea	94·1[1]	38·6[20]	—	—	—	—	—	284·4
New Zealand	59·2	51·4	—	0·9	—	—	964·5	—
Nicaragua	262·3	—	—	—	—	—	—	—
Nigeria	1·1	[16]	—	—	[21]	—	650·4	—
Northern Rhodesia	[22]	311·9	352·7[2]	—	14·1[2]	25·7[2]	—	—
Norway	—	147·9	16·5	573·2[23]	0·5	6·0	499·3	—
Pakistan	—	—	—	—	—	—	671·3[8]	197·1
Papua	0·3[1]	—	—	—	—	—	—	—
Peru	134·9	18,853·2	34·4	—	108·1	133·0	253·5	2,410·8
Philippines	469·4	633·4	14·6	722·0	2·5	1·8	153·7	—
Poland	—	—	—	726·4[6]	—	—	93,075·8	253·5
Portugal	18·4[1]	—	3·1	—	2·1	—	487·2	—
Qatar	—	—	—	—	—	—	—	3,633·2
Roumania	112·5[15]	482·3[10]	—	324·1	3·9[2,10]	—	179·7[10]	4,574·6[6]
Saar	—	—	—	—	—	—	17,896·0	—
Sarawak	0·9	—	—	—	—	—	—	57·3
Saudi Arabia	73·1[1]	—	—	—	—	—	—	44,861·9
Sierra Leone	2·6	[16]	—	774·9	—	—	—	—
Southern Rhodesia	496·7	80·4	—	39·4	—	—	2,820·8	—
South-West Africa	[13,22]	1,064·2	16·3	—	61·4	17·1	—	—
Spain	—	549·8	8·4	1,587·3	47·5	94·8	13,267·4	—
Sweden	70·5[1]	1,144·6[1]	14·9	11,243·6	23·8	42·9	382·5	—
Switzerland	—	—	—	58·4	—	—	—	—
Tanganyika	64·7[3]	—	—	—	—	—	—	—
Trinidad	—	—	—	—	—	—	—	3,394·0
Tunisia	—	61·1	—	574·3	25·7	4·1	—	—
Turkey	—	—	25·7[2]	267·9	1·0	1·7[1]	5,286·7	23·9
Uganda	0·2[3]	—	—	—	—	—	—	—
Union of South Africa	11,818·7	1,176·7	37·7	1,197·1	0·6	—	30,936·4	—
U.S.S.R.	—	—	—	—	—	—	330,693·3[8]	51,808·6
United Kingdom	—	25·7[1]	—	5,454·2[24]	4·4	1·9	253,669·3[26]	62·2
United States of America	1,927·0[26]	39,841·1[26]	924·5	55,482·6[27]	384·0	666·0	499,103·3	345·943·8
Venezuela	0·2	—	—	1,390·0	—	—	27·8	104,305·1
Yugoslavia	44·6	2,578·5	40·8	357·1	87·1	52·7	1,114·4	167·4

[1] 1951 figure.
[2] Smelter production.
[3] Exports.
[4] Includes purchases by the Central and Mining Banks.
[5] Consists of the Gold Coast, Nigeria and Sierra Leone.
[6] 1948 figure.
[7] Shipments.
[8] Includes lignite.
[9] Excludes Formosa (Taiwan) and Manchuria, shown separately.
[10] 1947 figure.
[11] 1946 figure.
[12] Only that coal transported by rail.
[13] 1950 figure.
[14] Excludes the Saar, shown separately.
[16] 1949 figure.
[16] Included in British West Africa.
[17] Excludes Burma and Pakistan, shown separately.
[18] Fiscal year beginning Mar. 20, 1952.
[19] Fiscal year ended Aug. 31, 1952.
[20] Fiscal year ended June 30, 1951.
[21] Less than 50 tons.
[22] Less than 50 oz. t.
[23] Includes ferro-titanium.
[24] Year of 53 weeks.
[25] Great Britain only. Excludes coal produced at quarries but includes opencast coal.
[26] Includes Alaska.
[27] Excludes manganiferous iron ores.

CHAPTER XII.—POWER GENERATION AND UTILIZATION

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Water-Power Resources and Their Development*

Canada, a land of many lakes and rivers, has been abundantly endowed by nature with great water-power resources which are well distributed across the country. In most sections, adequate precipitation and favourable topography result in numerous rivers on which falls and rapids frequently occur and offer excellent opportunities for the development of hydraulic power; with the exception of the prairies of the middle west, water-power resources of importance are found in virtually every part of the country. In British Columbia, where precipitation is high, the rivers flowing down the Pacific slope of the Rocky Mountains offer many fine power sites. Alberta, although a prairie province, also has mountain streams from the Rockies as well as great reserves of undeveloped power on its large northern rivers. The great Canadian Shield of Precambrian rock, which forms an arc around Hudson Bay, covers a portion of the Northwest Territories and northern Saskatchewan as well as a large part of Manitoba, Ontario, Quebec and Labrador; it is a rough, forest-covered, well-watered area characterized by innumerable lakes and by rivers with many falls and rapids. The water power of the Great Lakes-St. Lawrence River System forms part of the great resources of Ontario and Quebec upon which their status as the principal manufacturing provinces of Canada is dependent and which compensates in large degree for the lack of indigenous coal. In New Brunswick, Nova Scotia and on the Island of Newfoundland, precipitation is moderately heavy and the rivers, though not large, afford numerous possibilities for power developments of moderate size. In Labrador, the potential resources of the Hamilton River are outstanding.

An accurate comparison of Canada's water-power resources and their development with those of other countries† is not possible owing to incomplete world statistics and differing bases of tabulation. However, from figures available at the end of 1952, it appears that Canada ranks second among the countries of the world in total installed capacity, being exceeded only by the United States; in installation per thousand population, Canada is exceeded only by Norway. Canada is in approximately fifth place in potential power resources but, on the whole, those resources are more readily available to prospective markets than are those of other countries that outrank Canada, an exception being the United States. In particular, might be mentioned the enormous potential resources of the great river systems of Africa and Asia.

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* Revised in the Water Resources Division, Department of Northern Affairs and National Resources, Ottawa.

† More detailed information on the water-power resources of other countries is given in the 1951 Year Book, pp. 531-533.

Subsection 1.—Available and Developed Water Power in Canada

Table 1 gives a summary of the water-power resources of Canada and their development as at Dec. 31, 1953.

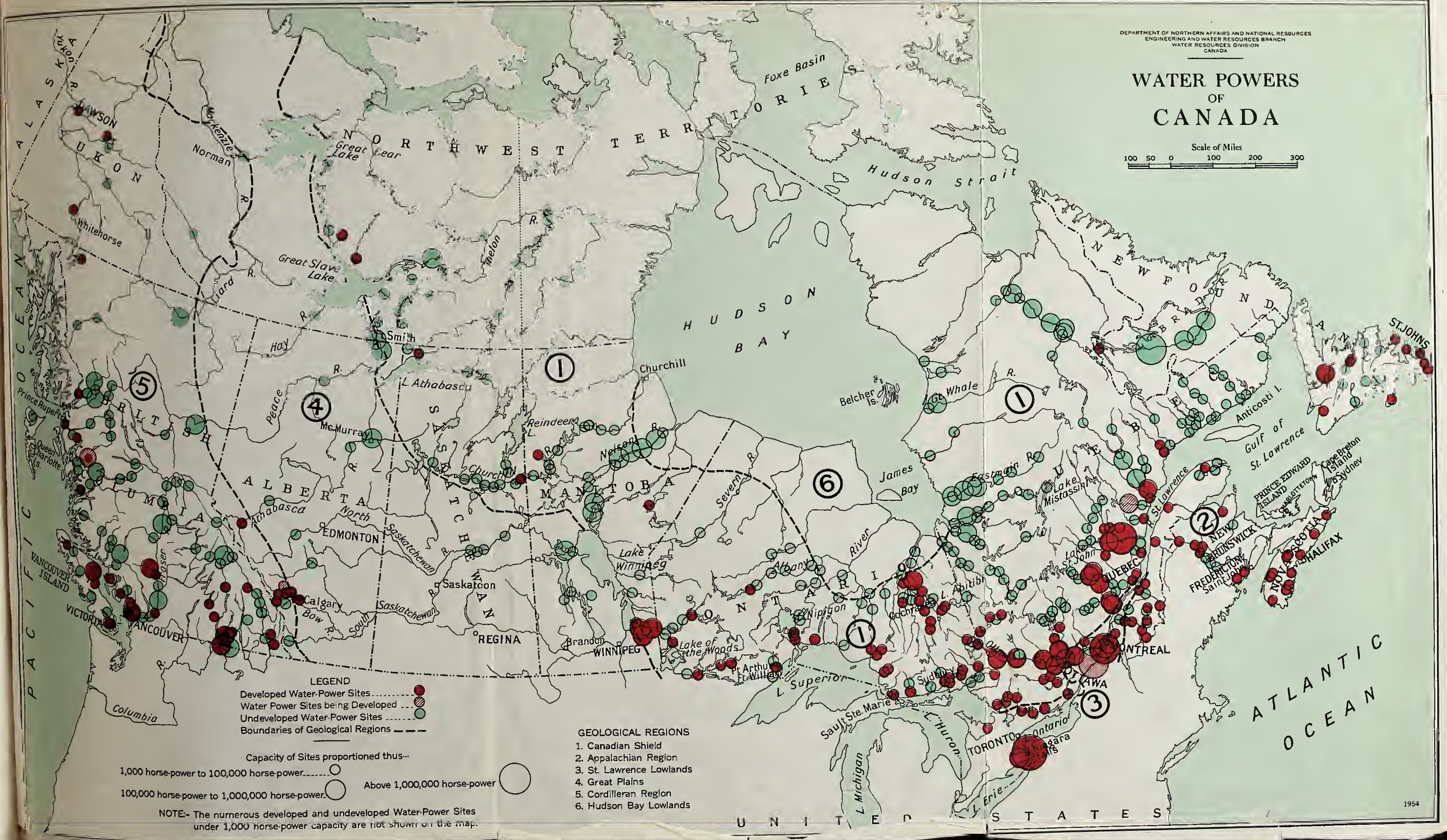
1.—Available and Developed Water Power, by Province, as at Dec. 31, 1953

Province or Territory	Available 24-Hour Power at 80 p.c. Efficiency		Turbine Installation[1]
	At Ordinary Minimum Flow	At Ordinary Six-Months Flow	
	h.p.	h.p.	h.p.
Newfoundland	958,500	2,754,000	311,150
Prince Edward Island	500	3,000	1,900
Nova Scotia	25,500	156,000	162,433
New Brunswick	123,000	334,000	164,130
Quebec	10,896,000	20,445,000	7,719,122
Ontario	5,407,000	7,261,000	4,006,686
Manitoba	3,333,000	5,562,000	716,900
Saskatchewan	550,000	1,120,000	109,835
Alberta	508,000	1,258,000	207,960
British Columbia	382,500	814,000	1,496,518
Yukon and Northwest Territories	7,023,000	10,998,000	32,440
Canada	**29,207,000**	**50,705,000**	**14,929,074**

[1] Includes water wheels and hydraulic turbines installed.

The figures given in the first and second columns of the above table represent 24-hour power and are based upon rapids, falls and power sites of which the actual drop, or the head of possible concentration, has been measured or at least carefully estimated. Tabulations of potential power in Canada are still not complete as many unrecorded rapids and falls of undetermined power capacity exist on rivers and streams throughout the country, particularly in the less-explored northern districts. Apart from areas where definite studies have been carried out and the results recorded, no consideration has been given to the power concentrations that are feasible on rivers and streams of gradual gradient, where economic heads possibly may be created by the construction of dams. Thus, the figures in Table 1 of available power, under the two conditions of stream flow, represent only the *minimum* water-power possibilities of Canada.

The third column of the table gives the total capacity of the water wheels actually installed. These figures should not be placed in direct comparison with those in the first and second columns to deduce the percentage of the available water-power resources that has been developed. At developed sites, the water-wheel installation averages 30 p.c. greater than the corresponding calculated maximum available power at the same sites. Figures of Table 1, therefore, indicate that the *at present recorded* water-power resources will permit of a turbine installation of nearly 66,000,000 h.p. and that the turbine installation at Dec. 31, 1953, represents less than 23 p.c. of recorded water-power resources.



DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
ENGINEERING AND WATER RESOURCES BRANCH
WATER RESOURCES DIVISION
CANADA

WATER POWERS OF CANADA

Scale of Miles
100 50 0 100 200 300
LEGEND
Developed Water-Power Sites ●
Water Power Sites being Developed ▨
Undeveloped Water-Power Sites ○
Boundaries of Geological Regions — — —
Capacity of Sites proportioned thus--
1,000 horse-power to 100,000 horse-power ○
100,000 horse-power to 1,000,000 horse-power ○
Above 1,000,000 horse-power ○
GEOLOGICAL REGIONS
1. Canadian Shield
2. Appalachian Region
3. St. Lawrence Lowlands
4. Great Plains
5. Cordilleran Region
6. Hudson Bay Lowlands
ALASKA
Yukon R.
YUKON
DAWSON
Whitehorse
Mackenzie R.
Norman
NORTHWEST TERRITORIES
Great Bear Lake
Great Slave Lake
Liard R.
Hay R.
Peace R.
Smith
L. Athabasca
McMurray
Thelon R.
Foxe Basin
Hudson Strait
HUDSON BAY
Churchill
Belcher Is.
Gt. Whale R.
James Bay
PACIFIC OCEAN
Prince Rupert
Queen Charlotte Is.
BRITISH COLUMBIA
VANCOUVER ISLAND
VICTORIA
VANCOUVER
Fraser R.
Columbia R.
ALBERTA
Athabasca R.
EDMONTON
North Saskatchewan R.
Calgary
Bow R.
South Saskatchewan R.
SASKATCHEWAN
Saskatoon
REGINA
Churchill R.
Reindeer L.
MANITOBA
Nelson R.
Lake Winnipeg
Brandon
WINNIPEG
Lake of the Woods
Severn R.
Albany R.
ONTARIO
Nipigon
Pt. Arthur
Ft. William
L. Superior
Sault Ste. Marie
L. Michigan
L. Huron
Sudbury
Cochrane
L. Abitibi
OTTAWA
TORONTO
L. Ontario
Niagara Falls
L. Erie
Eastmain R.
Lake Mistassini
Lake St. John
QUEBEC
MONTREAL
St. Lawrence R.
NEWFOUNDLAND
LABRADOR
ST. JOHNS
Anticosti I.
Gulf of St. Lawrence
NEW BRUNSWICK
FREDERICTON
Saint John
PRINCE EDWARD ISLAND
CHARLOTTETOWN
Cape Breton Island
Sydney
NOVA SCOTIA
HALIFAX
ATLANTIC OCEAN
UNITED STATES
① ② ③ ④ ⑤ ⑥

NOTE:- The numerous developed and undeveloped Water-Power Sites under 1,000 horse-power capacity are not shown on the map.

1954

The development from year to year of Canada's water-power resources is a good index of the country's industrial growth and of the change in its economic life since the beginning of the present century. In 1900, prior to the inception of long-distance transmission of electricity, Canada's economy was based largely on agriculture and the total of hydraulic installations, mostly small mills, was only 173,000 h.p. After the successful solution of the problems of transmission of electric energy for use in distant communities, the development of large hydraulic projects became practicable and, by 1910, total installation had risen to 977,000 h.p. In ensuing decades, the growth in installed capacity, partly speeded by war demands, proceeded at an accelerated rate.

The figures in Table 2, and the graph on p. 544, show clearly the consistent growth in the total capacity of hydraulic installations since the beginning of the century. In the period 1900-05, the average annual increase was about 56,000 h.p., a rate that was stepped up sharply in subsequent years because of improvements in the transmission of electricity and the building of large central electric stations. During the period 1906-22, development proceeded at a fairly uniform rate of 150,000 h.p. per annum. The heavier demand for electricity during the prosperous 1920's increased the rate of installation sharply in 1923 and it continued at about 377,000 h.p. per annum for the period 1923-35. As an aftermath to the economic depression, the rate of installation was low during the years 1936-39, whereas the power required for war purposes accounted for the high average rate of increase of 481,000 h.p. per annum during the period 1940-43. Few developments were undertaken in the later war years or in the immediate post-war period, so that only a small amount of new capacity came into operation in the 1944-47 period. However, the results of the later post-war program of construction are apparent in the large growth in the years 1948-53 when the average rate was about 740,000 h.p. per annum. Present programs of expansion indicate a continuation of this rate of growth for some years.

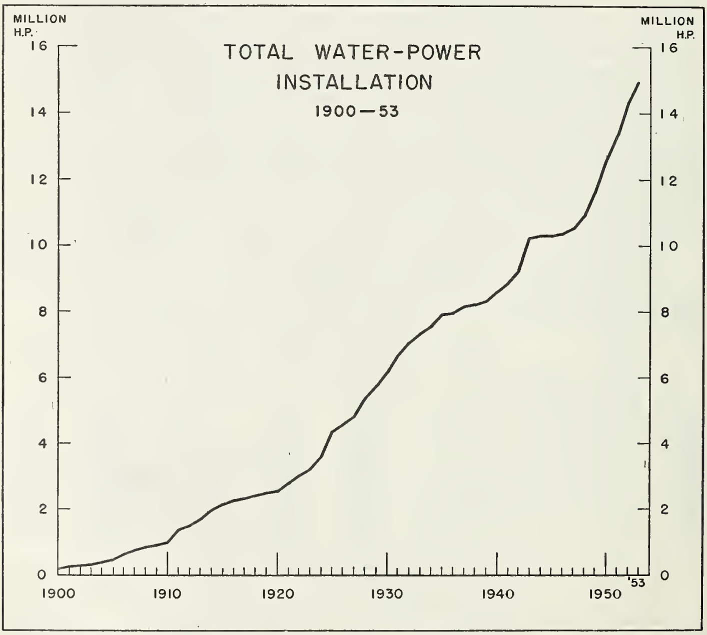
2.—Hydraulic Turbine Horse-Power Installed, by Province, as at Dec. 31, Decennially 1900-50 and Annually 1951-53

Note.—Figures for each year 1900-30 are given in the 1939 Year Book, p. 362, for 1931-39 in the 1946 edition, p. 362, and for 1940-49 in the 1954 edition, pp. 556-557.

Year	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
1900	—	1,521	19,810	4,601	82,864	53,876
1910	—	1,760	31,476	11,197	334,763	490,821
1920	—	2,233	37,623	21,976	955,090	1,057,422
1930	—	2,439	114,224	133,681	2,718,130	2,088,055
1940	—	2,617	139,217	133,347	4,320,943	2,597,595
1950	262,810	2,299	150,960	133,111	6,372,812	3,513,840
1951	279,160	2,299	150,960	132,911	6,755,351	3,718,505
1952	292,660	2,299	162,455	135,511	7,263,621	3,948,466
1953	311,150	1,900	162,433	164,130	7,719,122	4,006,686

Year	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and N.W.T.	Canada
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
1900	1,000	—	280	9,366	5	173,323
1910	38,800	30	655	64,474	3,195	977,171
1920	85,325	35	33,122	309,534	13,199	2,515,559
1930	311,925	42,035	70,532	630,792	13,199	6,125,012
1940	420,925	90,835	71,997	788,763	18,199	8,584,438
1950	595,200	111,835	107,225	1,284,208	28,450	12,562,750
1951	596,400	111,835	207,825	1,358,808	28,450	13,342,504
1952	716,900	111,835	207,825	1,432,858	31,450	14,305,880
1953	716,900	109,835	207,960	1,496,518	32,440	14,929,074

The availability of large amounts of hydro-electric energy has so fostered the economical utilization of the natural products from land, forest and mine that Canada is rapidly becoming highly industrialized. Low-cost power is fundamental in meeting the enormous requirements of the pulp-and-paper industry—Canada's largest industry and one of the world's great industrial enterprises; it also allows the economical mining, milling and refining of base and precious metals and facilitates their fabrication into a multitude of manufactured articles. Canada's outstanding growth in the post-war period has been made in conjunction with accelerated development of water-power resources. From hydro-electric plants ranging in capacity from a few hundred to more than 1,000,000 h.p., networks of transmission line carry power to most urban centres and to an increasing number of rural districts. This wide distribution of power has facilitated the decentralization of industry, enabling manufacturing processes to be carried on in many of the smaller centres of population. Economical domestic electrical service, too, contributes in no small measure to the high standard of living in Canada.



With a total capacity of 14,929,074 h.p., present water-power plants in Canada, if operated at full load, would produce energy at a rate corresponding to the output of more than 149,000,000 manual workers, on the commonly accepted basis of one mechanical horse-power equalling the working capacity of ten men.

Table 3 shows, under three classifications, the purposes for which the developed water power is primarily utilized.

3.—Developed Water Power, by Province and Industry, as at Dec. 31, 1953

Province or Territory	Turbine Installation			Total[4]
	In Central Electric Stations[1]	In Pulp and Paper Mills[2]	In Other Industries[3]	
	h.p.	h.p.	h.p.	h.p.
Newfoundland	126,850	182,300	2,000	311,150
Prince Edward Island	387	—	1,513	1,900
Nova Scotia	147,295	10,337	4,801	162,433
New Brunswick	134,700	23,872	5,558	164,130
Quebec	7,313,318	350,344	55,460	7,719,122
Ontario	3,701,787	224,057	80,842	4,006,686
Manitoba	715,000	—	1,900	716,900
Saskatchewan	106,500	—	3,335	109,835
Alberta	205,900	—	2,060	207,960
British Columbia	12,740	—	19,700	32,440
Yukon and Northwest Territories	971,311	137,600	387,607	1,496,518
Canada	**13,435,788**	**928,510**	**564,776**	**14,929,074**
Percentages of total installation	90·0	6·2	3·8	100·0

[1] Includes only hydro-electric stations that develop power for sale. [2] Includes only water power *actually developed* by pulp and paper companies. [3] Includes only water power *actually developed* by industries other than central electric stations and the pulp and paper industries. [4] Includes water wheels and hydraulic turbines installed.

The central electric station classification totalling 13,435,788 h.p. represents 90 p.c. of the total developed water power as at Dec. 31, 1953. In 1900 the corresponding percentage was 33·5, thus showing the tremendous growth in central electric station installations since the inception of successful long-distance transmission of electricity. Central hydro-electric stations produced 94 p.c. of all electricity sold in or exported from Canada during 1953.

The pulp and paper turbine installation total of 928,510 h.p. includes only water power *actually developed* and directly used by pulp and paper companies. In addition, this industry is the greatest purchaser of central electric station power, buying more than 15 p.c. of all power sold for industrial purposes. Part of the purchased power is classed as secondary, being used for steam generation by electric boilers.

The 'other industries' group develops 564,776 h.p. solely for its own use. These diversified industries also provide a broad market for the power sold by the central electric stations.

The figure of total hydraulic installation in Canada, 14,929,074 h.p. is the cumulative total of all existing installations of water wheels and hydraulic turbines irrespective of whether or not the equipment has been in use during the year. It has been adjusted to Dec. 31, 1953, by the inclusion of new installations completed during the year and by deletion of those old units which were dismantled.

Subsection 2.—Water-Power Developments in the Provinces and Territories, 1953

Although a tremendous amount of hydro-electric construction was carried out in Canada during 1953, the net increase in installed capacity of 623,194 h.p. was somewhat lower than that of recent years. However, plants and extensions under construction for operation in 1954 totalled 1,500,000 h.p. and those for later years about an equal amount. Projects undertaken or under investigation at rather remote locations emphasize the future economic value of other undeveloped sites in unsettled regions. Construction in the field of power distribution and in the building of thermal-electric plants also was active. Over-all progress in each of the provinces, principally covering hydro-electric development, is outlined below.

Atlantic Provinces.*—The Newfoundland Light and Power Company completed the construction of its second plant on the Horse Chops River, having a capacity of 10,000 h.p. in one unit; also investigations were carried out on Pipers Hole River on which there are three sites totalling about 31,000 h.p. The Anglo-Newfoundland Development Company has completed the modernization of its Bishop's Falls development on the Exploits River, resulting in an increase in capacity of 6,000 h.p., making a total of 21,900 h.p. The Union Electric Light and Power Company investigated a site on the Trinity River where it is proposed to develop 2,000 h.p. under 260-foot head. The Iron Ore Company made favourable progress on its development at Menihek Rapids on the Ashuanipi River, a tributary of the Hamilton River in Labrador, and it is expected that the plant of 12,000 h.p. in two units will be in operation in August 1954; ultimately two additional units may be installed.

No new developments were completed in Nova Scotia in 1953 but the Nova Scotia Light and Power Company Limited had under construction for 1954 operation a plant of 9,000 h.p. on the Nictaux River near Middleton. The Nova Scotia Power Commission is proposing to develop 6,000 h.p. under 22-foot head on the Mersey River near Liverpool for 1955 operation.

The New Brunswick Electric Power Commission brought into operation in April its two-unit 27,000-h.p. plant at The Narrows on the Tobique River. Active investigations were carried out on the Beechwood site on the St. John River with a view to building a plant initially of two units, each of 48,000 h.p. Surveys also were made of a site of about 10,000 h.p. on the Sisson River, a tributary of the Tobique River. The St. George Pulp and Paper Company Limited carried out a modernization program resulting in an increase in capacity of 2,812 h.p. in its plant on the Magaguadavic River. The plant is now rated at 7,812 h.p. in four units.

Quebec.—The Quebec Hydro-Electric Commission completed its Beauharnois Power-house No. 2 by a two-unit addition of 111,000 h.p., bringing over-all capacity of the development to 1,400,000 h.p. On the upper Ottawa River, the construction of the Commission's two-unit 32,000-h.p. Rapid II development proceeded on schedule with operation expected in June 1954. Construction was commenced on a 1,200,000-h.p. hydro-electric development on the Bersimis River about 62 miles above its mouth, with 300,000 h.p. to be developed initially for 1956 operation. Part of the output of this plant will be transmitted to the Gaspe Peninsula by a 32-mile submarine cable to be laid in 1954 on the bed of the St. Lawrence River.

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* In addition to water-power development, the construction of fuel-electric plants included: a diesel unit of 3,850 h.p. at St. John's by the Newfoundland Light and Power Company; an additional unit of 22,000 kw. in the Halifax steam plant of the Nova Scotia Light and Power Company; and a unit of 18,780 kw. in the Grand Lake steam plant of the New Brunswick Electric Power Commission.

The Aluminum Company of Canada Limited completed its 285,000-h.p. Chute-à-la-Savanne development on the Peribonca River by bringing into operation the remaining four units each of 57,000 h.p. The Price Brothers and Company Limited brought into operation two new plants on the Shipshaw River—70,000 h.p. in two units at Chute-des-Georges and 9,000 h.p. in one unit below Lac Brochet. The Manicouagan Power Company completed the installation of the second unit of 56,200 h.p. in its plant near the mouth of the Manicouagan River, which is designed for six units to be added as required. The Ste. Marguerite Power Company proceeded with the construction of a two-unit 17,000-h.p. plant on that River for 1954 operation. The city of Mégantic had work in progress on the development of 4,500 h.p. on the Chaudière River, with operation of one 2,250-h.p. unit expected in May 1954. The Quebec Rural Electrification Bureau's two-unit development of 1,200 h.p. on the Petites Bergeronnes River at Lac des Sables was scheduled for completion early in 1954.

The Shawinigan Water and Power Company undertook the installation, for 1955 operation, of one additional unit in each of its Rapide Blanc, La Trenche, and La Tuque plants, having a combined total of 158,500 h.p. The diversion works to provide flow from the Megiscane and Susie Rivers into Gouin Reservoir were completed in August 1953. The MacLaren-Quebec Power Company completed the building of a new storage dam on the Lièvre River at the outlet of Kiamika Lake, and one was under construction on the Métis River by the Lower St. Lawrence Power Company. The Quebec Streams Commission carried out stream-flow regulation on a number of important rivers on which storage dams are operated. Reconstruction of dams on the St. Francis, Métis and Manouane Rivers was completed and repairs were made to the La Loutre power plant. Preliminary investigations of water-power sites on the Rupert, Chamouchouane and Bazin Rivers were carried out, also flood-control studies on the Ste. Anne de la Pérade and Salmon Rivers. Flood-protection works were built at a number of locations throughout the Province.

Ontario.—The Hydro-Electric Power Commission of Ontario completed its Otto Holden Generating Station on the Ottawa River above Mattawa by installing the eighth unit of 33,000 h.p., bringing total capacity to 264,000 h.p. Good construction progress was made on the Commission's 12-unit 1,370,000-kw. Sir Adam Beck Generating Station No. 2 on the Niagara River at Queenston, and initial operation was scheduled for 1954. Excavation of the two large tunnels and of the canal and forebay was practically completed; concrete placing in the head works, tunnels and power-house was well advanced; and four penstocks and part of the power-house superstructure were erected. Plans for the development include a 15,000-acre-foot pumped-storage reservoir adjacent to the forebay. At the Commission's Pine Portage Generating Station on the Nipigon River, two additional units each of 45,000 h.p. were being installed for operation in the autumn of 1954. Preliminary construction was begun on a development at Manitou Falls on the English River, which will have a total dependable peak capacity of 42,100 h.p. in three units for 1956 operation.*

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* In addition, the two large steam-electric plants at Toronto and Windsor were completed, the Toronto station having a present capacity of 388,000 kw. in four units and the Windsor station 264,000 kw. in four units.

The Great Lakes Power Company completed the construction of its two-unit 20,000-h.p. development at Scott Falls on the Michipicoten River. Good progress was made on the Company's McPhail Falls project, a few miles upstream on the same river, and operation of the two-unit 15,000-h.p. plant was planned for late 1954.

Prairie Provinces.*—No new hydro-electric units were brought into operation in Manitoba in 1953, but the Manitoba Hydro-Electric Board continued construction on its McArthur Falls development of 80,000 h.p. on the Winnipeg River. Four units each of 10,000 h.p. are scheduled for operation by December 1954 and plant completion in 1955. In connection with the Laurie River development of Sherritt-Gordon Mines Limited, a control and diversion dam was completed on the Loon River; surveys for a new development were made at a site about seven miles above the present plant.

In Alberta, Calgary Power Limited had under installation a third unit rated at 33,000 h.p. in its Ghost plant on the Bow River, which will bring plant capacity to 69,000 h.p. by June 1954. Construction was proceeding on the Bearpaw development, on the Bow River near Calgary, consisting of one unit of 22,000 h.p. for operation in late 1954 or early 1955. In connection with the Spray River development, two pump stations were being installed to raise water from Goat Creek into the Spray canal, thus substantially increasing the power output of the Spray and Rundle plants.

British Columbia.†—The British Columbia Power Commission completed the installation of the final two units, each of 28,000 h.p., in the John Hart development on Campbell River, Vancouver Island, bringing total capacity to 168,000 h.p. To provide additional storage for this development, surveys and drilling were carried out at Buttle Lake for a dam to be built in 1954. The redevelopment of the dismantled Puntledge River plant was undertaken and a single unit of 35,000 h.p. driving a 30,000-kva. generator was being installed, with initial operation probably late in 1954. Contracts were awarded and work commenced on a development on the Spillimacheen River to consist of three units with a total capacity of 5,500 h.p. for 1955 operation. The Whatshan plant of 33,000 h.p. was badly damaged by two landslides during August and was not restored to full operation by the end of 1953.

The British Columbia Electric Company Limited continued construction towards the installation of a fourth unit of 62,000 h.p. in its Bridge River plant for 1954 operation. The raising of the La Joie storage dam to provide increased reservoir capacity was also continued. Surveys were made covering a proposed development on Seton Creek to further utilize the water diverted through the Bridge River plant; active construction will begin in 1954 and it is planned to have the single unit of 58,000 h.p. driving a 42,000-kva. generator in operation in 1956. A 4,860-h.p. turbine, which served a few years ago in a temporary capacity at Bridge River, was re-installed in the Jordan River No. 1 plant, bringing the capacity to 38,985 h.p.

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* The City of Winnipeg had under installation a 25,000-kw. steam-electric unit for 1954 operation. The Saskatchewan Power Corporation completed a 20,000-kw. single-unit addition to its steam plant at Estevan, and started, for 1954 operation, the installation of a 25,000-kw. unit in the Saskatoon plant. A 4,300-kw. gas-engine generator set was installed at Unity. Additions to thermal capacity in Alberta include a steam-turbo generator of 30,000 kw. by the City of Medicine Hat in collaboration with Calgary Power Limited; City of Edmonton, a gas-fired steam-turbo generator, 30,000 kw.; City of Lethbridge, 5,000-kw. steam unit; and Canadian Utilities Limited at Grande Prairie, diesel unit of 1,200 kw.

† The Northern British Columbia Power Company Limited installed a diesel unit of 2,750 h.p. as auxiliary to its hydro-electric installations. The Powell River Company Limited added a 13,125-kw. steam turbo-generator to supply additional power to its mill at Stillwater.

Favourable progress was made by the Aluminum Company of Canada on its great Kemano-Kitimat project involving the diversion of the headwaters of the Fraser River through the Coast Range. The drilling of the 10-mile 25-foot-diameter diversion tunnel from Tahtsa Lake and of the penstock tunnel was essentially completed at the end of 1953. The underground power-house was completed and the work of installing three 140,000-h.p. turbines and 106,000-kva. generators was well advanced for operation in May 1954. The 50-mile transmission line from Kemano to Kitimat was virtually completed. The spillway for the Kenney Dam on the Nechako River was ready for operation. Ultimate capacity may be more than 2,000,000 h.p.

The Consolidated Mining and Smelting Company of Canada Limited expects to complete the construction of its Waneta development on the Pend d'Oreille River early in 1954. The plant will contain two turbines each of 105,000 h.p. and ultimately two additional units may be installed. Alaska Pine and Cellulose Limited completed the installation of a 3,200-h.p. turbine, driving a 2,500-kva. generator in its plant at the outlet of Victoria Lake, Vancouver Island. Plant capacity is 4,400 h.p., the power being used principally for pumping purposes.

Yukon Territory.—The Yukon Hydro Company Limited, serving the town of Whitehorse, added a Pelton wheel of 940 h.p. driving an 875-kva. generator to its Porter Creek plant, to bring capacity to 1,390 h.p.

Surveys and investigations towards a major hydro-electric development, involving the storage of Yukon River headwaters and their diversion through the Coast Range, were carried out during the summer of 1953 and will be continued in 1954 by Ventures Limited and its subsidiary companies, Frobisher Limited and Quebec Metallurgical Industries Limited. Preliminary planning indicates that, initially, a development of about 25,000 h.p. may be made on one of the rivers on the Pacific slope in northern British Columbia.

THE ST. LAWRENCE POWER PROJECT*

Joint international development of power in the International Rapids Section of the St. Lawrence River was officially begun on Aug. 10, 1954. Ceremonies held in the presence of government leaders from Canada and the United States marked the inauguration on that day of a 1,640,000-kw. project that has been the subject of international interest for more than forty years. The power thus to be provided is essential to the continued progress of Ontario, and in view of Ontario's important role in the national economy, to Canada as a whole.

The project will be a joint undertaking on the part of The Hydro-Electric Power Commission of Ontario and the Power Authority of the State of New York. The former was authorized by legislation of the Governments of Canada and of Ontario to construct the Canadian part of the work, and the latter was named by President Eisenhower as the entity to undertake the work on the United States side of the river. Each of the power authorities will assume the cost of the generating equipment installed in its own half of the power-house. They will share equally in all other costs of construction and in the total output of the generating station.

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* Contributed by The Hydro-Electric Power Commission of Ontario, Toronto, Ont.

Ontario Hydro's interest in the St. Lawrence power development dates from as early as 1913 when the first investigations into the possibilities of the International Rapids Section were undertaken. Although interrupted by World War I, these investigations were completed in 1921 and the findings were submitted to the International Joint Commission which had been set up by the Boundary Waters Treaty of 1909 to deal with problems related to the use of international waters. This first formal statement was favourably received by the International Joint Commission, and a Joint Board of Engineers was set up to study how the power could best be developed. Following upon a report by the Joint Board, representatives of Canada and the United States, in 1932, signed The St. Lawrence Deep Waterway Treaty which called for the construction, as an international undertaking, of a combined seaway and power project in the International Rapids section of the river.

The Treaty was, however, not ratified, and because of the association of the navigation and the power aspects of the project, proved to be only the beginning of a series of discussions, proposals, and counter-proposals extending over a period of more than twenty years.

Between 1932 and 1945, because of the delays attending the St. Lawrence development, the Commission met increasing demands for power partly by the purchase or construction of small generating stations, but for the most part by increased amounts of purchased power. Since 1945 power requirements have doubled and have exceeded available supplies of purchasable power. To meet demand the Commission found it necessary to embark on an extensive construction program and fifteen new sources of power have been developed. Those either partially or wholly in service at the end of 1953 have contributed to increasing the dependable peak capacity of the Commission's systems by 84 p.c. from 1,937,500 kw. in 1945 to 3,565,350 kw. Furthermore, agreements for the interchange of power were negotiated with the Detroit Edison Company in 1953 and in 1954 with the Niagara Mohawk Power Corporation of Syracuse, New York. These interconnections add to the security of the Commission's systems by making assistance available at times of emergency.

The construction program undertaken in 1945 has not only been extended from year to year with the increasing demands for power, but has also been adapted from time to time as authorization to proceed with the St. Lawrence power project continued to be delayed. For example, the Commission entered for the first time upon fuel-electric generation on a large scale in the construction of two large stations, one in Toronto and one in Windsor, with a combined installed capacity of 664,000 kw. at 60 cycles. The Sir Adam Beck-Niagara Generating Station No. 2, currently under construction and partially in service, was originally planned with an installed capacity of 450,000 kw. in six units, but was increased in ultimate installed capacity to 1,370,000 kw. by the inclusion of ten additional units and a pumped-storage scheme. (*See further* p. 547.) Other units at this station as they are placed in service and units in other stations under construction will assist in meeting power requirements up until 1957.

With the authorization to proceed with the development of the International Rapids Section of the St. Lawrence River, this project becomes the sixteenth new source of power in the Commission's construction program. It is the last major source of hydro-electric power available to the Commission within economic transmission distance of large load centres.

The frustrating delays which dogged the project for more than twenty years were, in part at least, attributable to the unavoidable association of the navigation and power aspects of the scheme, to which reference already has been made. Economically and physically the two aspects were very closely related, and uncertainty or postponement regarding the one necessarily involved the other. The power development must be a joint undertaking by Canada and the United States; the seaway, though interdependent with the power project, could be constructed by either country or by both countries entirely within their own national boundaries, or it could be constructed as a single international undertaking.

In 1951, Canadian spokesmen, aware of the urgent need for the development of power from the St. Lawrence River, and faced with seemingly insurmountable obstacles in the United States to the combined seaway and power project, began urging the construction of an all-Canadian seaway in association with the international power development. On Dec. 3, 1951, the Canadian Government signed an agreement with the Government of Ontario delegating to the Province the authority for the development of Canada's share of the power in the International Rapids Section of the St. Lawrence River. This agreement, which clarified and firmly established the Canadian policy regarding power, was later ratified by both Governments, and the Provincial Government in turn enacted legislation in October 1952 assigning to the Hydro-Electric Power Commission of Ontario the responsibility for constructing, operating, and maintaining the Canadian half of the power development.

Power aspects of the development were further clarified at the international level in October 1952 when the International Joint Commission approved an application by Canada and the United States to develop power from the International Rapids Section. More than two years were to pass, however, before United States policy regarding the power and navigation development was clearly defined. In July 1953, the Federal Power Commission announced its decision to grant a licence to the Power Authority of the State of New York to undertake the United States share of the power development. Appeals against this decision by opponents requesting a re-hearing were dismissed. A final appeal was taken to the Supreme Court of the United States. On June 7, 1954, the Supreme Court rejected the appeal and thereby removed the last legal obstacle to the power project. It was then possible for Canada to proceed with an all-Canadian seaway. However, since the United States Government had, early in 1954, approved a measure of United States participation in the seaway, negotiations were continued by the two countries with regard to the navigation features of the scheme.*

The flow of the St. Lawrence River provides one of the most dependable sources of power in the world. The principal structures of the new development on the St. Lawrence River consist of two power-houses and two dams. The structure incorporating the power-houses, in conjunction with a dam at the foot of the Long Sault Rapids, will establish a head-pond about 125 miles downstream from the eastern end of Lake Ontario. The development will make use of most of the mean difference of 92 feet in the water levels between Lake Ontario and Lake St. Francis. The operating head will range from 76·6 to 87·6 feet and the normal head will be 83 feet.

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* *See* the special article on "The St. Lawrence Seaway", Chap. XIX.

The construction operations in connection with the power houses and dams will not interrupt navigation in the present 14-foot canal. The structure incorporating the power-houses will have a maximum height of 162 feet above the foundation and an over-all length of 3,300 feet. It will span the channel between the eastern end of Barnhart Island and the Canadian shore, almost three miles west of Cornwall, and will be bisected by the International Boundary. The Canadian power-house, simple and functional in style, will be of the modified outdoor type, having removable housings rather than the conventional superstructure over the generating equipment. Each of the two power-houses will have 16 generating units. The switchyard for the United States power-house will be on Barnhart Island, the switchyard for the Canadian power-house will be located on the Canadian mainland.

The Long Sault dam will reach from the upper end of Barnhart Island to the United States mainland and will control the levels of the water in the head-pond, allowing any excess water to by-pass the power-houses as required. This dam will be a concrete, gravity, curved-axis, spillway structure, 2,250 feet long and having a maximum height of about 145 feet above the foundation. Its discharge capacity will far exceed the maximum flow of the river. The spillway section will have thirty vertical lift gates, each 50 feet in width.

The Iroquois dam will be about 25 miles upstream from the Long Sault dam and located between Iroquois Point on the Canadian side and Point Rockway on the United States side of the river. Its main purpose will be to regulate the flow of water from Lake Ontario.

In addition, some 14 miles of dykes will be required as well as improvements in the river channels in order to meet certain navigation and power requirements.

Preparations for the building of cofferdams and for dewatering the construction sites were begun in July 1954, and work was proceeding by the late summer. The first units are scheduled to be placed in service in 1958.

When the head-pond is raised to full level, areas on both sides of the river will be inundated. On the Canadian side the flooded area, about 20,000 acres extending along a 46-mile stretch of the river, will include the village of Iroquois, the hamlets of Aultsville, Farrans Point, Dickinson's Landing, Wales, Moulinette, and Mille Roches, and one-third of the town of Morrisburg. Some 6,500 people in this area will be affected. Between thirty-five and forty miles of railway line and approximately thirty-five miles of highway must be relocated, and all trees and structures will be removed from the land to be inundated.

Proposals for community planning and rehabilitation are being developed and as these proposals receive acceptance they will become a part of the over-all plan for the re-establishment of the communities in the St. Lawrence valley.

The investigations of 1913 and subsequent years into the power possibilities of the St. Lawrence River were again continued and expanded in the area of the present proposed power development in April 1952 when Commission crews began an intensive survey of the physical structure of the river-bed and the surrounding terrain. In boats piloted by experienced rivermen, Hydro surveyors crossed the river at regular intervals, exploring its contours by means of echo-sounders, while delicate recording instruments reproduced an accurate picture of the river-bed itself. In the vicinity of the Long Sault Rapids it was not possible to use these methods to obtain the accurate information required since the small sounding boats could not navigate in the rapids. Furthermore, the turbulence of the water interfered with the operation of the echo-sounders. Hydro crews solved the difficulty by taking soundings from a marker suspended by a fine wire from a helicopter hovering over a given point. Surveyors also metered the flow of the river in key sections. By correlating these data with information previously obtained, engineers were able to construct hydraulic models of the International Rapids Section. The models accurately simulate river conditions in the 35-mile section which they reproduce, duplicating to scale the shore line, the contours of the river-bed, and the flow of the water. They also provide the opportunity to test methods of carrying out the power project, assist in determining the best type of construction for the principal structures, and serve to indicate in advance of actual construction where substantial economies can be effected.

Other studies were undertaken to reveal the dyke-building qualities of the soil in the district and to determine the most appropriate locations for the dykes themselves.

When electric power is finally obtained from the St. Lawrence development, Canada's share will be fed into the grid serving the southern and northeastern part of the Province. In this highly productive area are located many of Canada's large industrial developments and the main sources of some of the country's vital raw materials. The supply of electric power has been an important factor in the productivity of the Province and the St. Lawrence power project will undoubtedly assist in its continuing economic development.

Section 2.—The Central Electric Station Industry

Central electric stations are companies, municipalities or individuals selling or distributing electric energy, whether generated by themselves or purchased for resale. Stations are divided into two classes according to ownership, viz.: (1) commercial—those privately owned and operated by companies or individuals, and (2) municipal—those owned and operated by municipalities or governments. These are subdivided according to the kind of power used into (*a*) hydraulic, (*b*) fuel, and (*c*) non-generating. This last sub-class purchases practically all the power it resells; a few of these stations have generating equipment that is held for emergencies. The hydraulic stations contain water turbines and wheels with approximately 88 p.c. of the total capacity of hydro installations in all industries in Canada. The generators driven by this hydraulic equipment generate 96 p.c. of the total output of all central electric stations.

4.—Electric Energy Generated, by Type of Station, 1938-52, and by Province, 1952

Year	Generated by—		Total	Year, Province or Territory	Generated by—		Total
	Water Power	Thermal Power			Water Power	Thermal Power	
	'000 kwh.	'000 kwh.	'000 kwh.	1952	'000 kwh.	'000 kwh.	'000 kwh.
1938	25,687,568[r]	466,592[r]	26,154,160	N'f'ld	228,875	4,416	233,291
1939	27,829,017[r]	509,013[r]	28,338,030	P.E.I.	509	35,370	35,879
1940	29,524,248[r]	585,035[r]	30,109,283	N.S.	461,296	503,475	964,771
1941	32,628,930	688,733	33,317,663	N.B.	455,500	297,387	752,887
1942	36,582,953	772,226	37,355,179	Que.	32,097,032	15,846	32,112,878
1943	39,660,312	819,281	40,479,593	Ont.	16,857,454	440,072	17,297,526
1944	39,553,352	1,045,427	40,598,779	Man.	2,694,924	4,322	2,699,246
1945	39,131,020	999,034	40,130,054	Sask.	544,447	534,862	1,079,309
1946	40,692,395	1,044,592	41,736,987	Alta.	760,296	413,706	1,174,002
1947	42,273,167	1,151,632	43,424,799	B.C.	2,852,359	134,902	2,987,261
1948	41,070,095	1,319,586	42,389,681	Yukon and N.W.T.	70,838	1,310	72,148
1949	42,779,199	1,639,374	44,418,573				
1950	46,624,218	1,869,500	48,493,718				
1951	52,955,002	1,896,842	54,851,844				
1952	57,023,530	2,385,668	59,409,198	**Canada, 1952**	**57,023,530**	**2,385,668**	**59,409,198**

Subsection 1.—Statistics of Central Electric Stations*

The growth of the central electric station industry has been practically continuous since 1919, when statistics of kilowatt hours generated were first made available. The general movement has been strongly upward and, based on monthly data, the output of central stations during 1952 was more than eleven times that of 1919. The central electric station industry is one that is particularly suited to large-scale operation because of the huge outlay of capital necessary. Total horsepower installed increased almost continuously even during the depression years, mainly because large power projects planned before the depression were in process of construction. Expansion since the end of World War II has been spectacular and large additional developments are currently under way (*see* pp. 546-549). Installed capacity of the industry in hydro and thermal units is now about equal to one horsepower for every Canadian.

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* Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

5.—Summary Statistics of Central Electric Stations, 1943-52

NOTE.—Figures for 1917-31 are given in the 1940 Year Book, p. 369, and for 1932-42 in the 1950 edition, p. 564.

Year	Generating Power Plants	Revenue from Sale of Power[1]	Power Equipment Main Plant	Kilowatt Hours Generated	Customers	Persons Employed	Salaries and Wages
	No.	$	h.p.	'000	No.	No.	$
1943	622	204,801,508	9,602,794	40,479,593	2,169,148	19,120	35,785,932
1944	626	215,246,391	9,713,791	40,598,779	2,238,023	19,770	36,945,296
1945	600	215,105,473	9,666,947	40,130,054	2,333,230	21,283	39,521,365
1946	600	226,096,273	9,825,459	41,736,987	2,476,830	24,577	46,422,998[r]
1947	607	243,705,976	9,601,157	43,424,799	2,643,327	26,704	54,120,717[r]
1948	635	257,377,490	10,038,541	42,389,681	2,822,027	29,349	61,974,958[r]
1949[2]	650	280,311,624	10,637,798	44,418,573	3,076,369	31,746	70,551,730[r]
1950	665	323,833,465	11,703,161	48,493,718	3,269,824	46,193[r]	71,773,595[r]
1951	647	374,643,376	12,781,610	54,851,844	3,439,750	47,467[r]	89,130,327[r]
1952	562	415,494,074	13,341,198	59,409,198	3,620,595	47,238	102,165,917[r]

[1] Excludes duplications. [2] Newfoundland included from 1949.

6.—Electric Energy Generated in Central Electric Stations, by Province, 1948-52

Province or Territory	1948	1949	1950	1951	1952
	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.
Newfoundland	...	200,610	147,470	172,436	233,291
Prince Edward Island	21,932	24,950	29,050	32,768	35,879
Nova Scotia	677,661	717,473	762,339	887,908	964,771
New Brunswick	591,636	651,253	696,519	756,087	752,887
Quebec	24,566,682	25,530,923	27,323,311	29,690,086	32,112,878
Ontario	11,095,608	11,324,407	12,718,518	15,985,056	17,297,526
Manitoba	2,055,709	2,159,998	2,449,383	2,564,537	2,699,246
Saskatchewan	804,994	858,088	903,144	978,773	1,079,309
Alberta	724,498	800,729	869,064	996,945	1,174,002
British Columbia	1,820,271	2,105,186	2,535,412	2,723,454	2,987,261
Yukon and Northwest Territories	30,690	44,956	59,508	63,794	72,148
Canada	**42,389,681**	**44,418,573**	**48,493,718**	**54,851,844**	**59,409,198**

Domestic Service.—Power used by domestic customers or for residential purposes amounts to over 14 p.c. of the total production of central electric stations. Details of the number of domestic customers served, the kilowatt hours delivered and the costs to the customers, exclusive of direct federal, provincial and municipal taxes on such service, are shown in Table 7. The average consumption per customer and average cost per kilowatt hour vary considerably as between municipalities and also as between provinces, but the differences in the average bills are smaller. The availability of low-cost power to domestic users contributes greatly to the high standard of living in Canada. Average consumption per customer is almost double that of 1939 and costs are 13 p.c. lower per kilowatt hour.

7.—Summary Statistics of Domestic Consumption of Electricity, 1943-52

Year	Customers	Consumption	Average Consumption per Customer	Average Charge per Annum	Average Charge per kwh.
	No.	'000 kwh.	kwh.	$	cts.
1943	1,852,367	2,843,612	1,535	27·70	1·80
1944	1,906,452	3,046,980	1,598	27·96	1·75
1945	1,987,360	3,365,497	1,693	28·05	1·66
1946	2,104,549	3,881,677	1,844	29·85	1·62
1947	2,246,253	4,383,222	1,951	31·28	1·60
1948	2,398,847	4,984,280	2,078	33·32	1·60
1949	2,619,831	5,678,847	2,168	34·47	1·59
1950	2,797,378	6,750,303	2,413	38·97	1·61
1951	2,951,988	7,726,114	2,617	43·25	1·65
1952	3,112,306	8,741,182	2,809	46·48	1·65

Farm Service.—Table 8 shows the number of farm customers, the average annual consumption, average annual revenue and the average revenue per kilowatt hour sold to these customers in each province in 1951 and 1952. Rural electrification has made considerable progress since the end of World War II. Farm customers added during 1952, totalled 23,525 and the national total at 359,870 increased by 7 p.c. over 1951. The relatively large numbers of farm customers in Ontario and the low average revenue per kilowatt hour is evidence of the assistance given in this field by the Ontario Government. It is estimated that about 57 p.c. of the farm dwellings in Canada enjoy the benefits of power-line service. Many other farms generate their own electricity by the use of engines, windmills, etc.

8.—Farm Service Furnished by Central Electric Stations, 1951 and 1952

Year and Province	Customers	Consumption of Electric Energy		Revenue Received		
		Total Kilowatt Hours	Average kwh. per Customer	Total	Average per Customer	Average per kwh.
	No.	'000	No.	$	$	cts.
1951						
Prince Edward Island	3,956	3,292	832	190,181	48·07	5·8
Nova Scotia	21,433	18,397	858	759,475	35·43	4·1
New Brunswick	34,085	28,083	824	1,659,719	48·69	5·9
Quebec	90,492	93,772	1,036	3,105,925	34·32	3·3
Ontario	127,595	422,296	3,310	8,351,550	65·45	2·0
Manitoba	23,777	58,841	2,475	1,684,036	70·83	2·9
Saskatchewan	5,594	7,084	1,266	478,404	85·52	6·8
Alberta	11,415	28,088	2,461	822,999	72·10	2·9
British Columbia	17,998	41,278	2,293	931,110	51·73	2·3
Totals, 1951[1]	**336,345**	**701,131**	**2,085**	**17,983,399**	**53·47**	**2·6**
1952						
Prince Edward Island	3,769	3,025	803	250,617	66·49	8·3
Nova Scotia	20,560	14,735	717	664,314	32·31	4·5
New Brunswick	36,354	30,710	845	1,824,564	50·19	5·9
Quebec	95,397	116,873	1,225	3,535,841	37·06	3·0
Ontario	133,409	480,894	3,605	9,372,808	70·26	1·9
Manitoba	29,623	78,963	2,666	2,156,227	72·79	2·7
Saskatchewan	8,591	13,117	1,527	705,491	82·12	5·4
Alberta	13,818	37,960	2,747	1,024,527	74·14	2·7
British Columbia	18,349	47,048	2,564	1,081,986	58·97	2·3
Totals, 1952[1]	**359,870**	**823,325**	**2,288**	**20,616,375**	**57·29**	**2·5**

[1] Does not include Newfoundland, Yukon Territory or Northwest Territories.

Equipment of Central Electric Stations.—Auxiliary equipment includes only thermal engines and generators operated by them in hydraulic stations and in non-generating plants and does not include spare equipment in thermal stations or spare hydraulic equipment in hydraulic stations. Such equipment is classed as main-plant equipment. The capacities of the equipment are the manufacturers' ratings and, for water wheels and turbines, the kilowatt hour capacities vary with the supply of water. The majority of the hydraulic stations are large, serving wide areas over transmission lines, whereas most of the plants with thermal engines are small, serving the needs of the local municipality. In 1952, the number of thermal engines decreased as compared with previous years. Larger units are being installed to replace, in some instances, two or three small units. Equipment data were not included for small industries or firms, particularly in Saskatchewan and Alberta, where output was largely consumed by their own plants.

9.—Main-Plant Equipment of Central Electric Stations, by Province, and Total Auxiliary-Plant Equipment, 1951 and 1952

Note.—Kva. means kilo-volt-amperes.

Year, Type of Equipment, Province or Territory	Generating Power Plants	Water Wheels and Turbines		Thermal Engines		Generators	
		No.	Capacity	No.	Capacity	No.	Capacity
	No.		h.p.		h.p.		kva.
1951							
Main-Plant Equipment—							
Newfoundland	19	30	71,215	4	264	35	60,088
Prince Edward Island	7	5	369	17	21,240	21	17,368
Nova Scotia	51	61	136,158	41	185,121	102	271,739
New Brunswick	16	12	101,600	29	90,456	41	165,017
Quebec	99	289	6,350,481	13	2,520	301	5,339,864
Ontario	141	373	3,376,240	11	253,705	384	2,921,307
Manitoba	9	37	594,500	7	2,115	44	445,870
Saskatchewan	118	6	106,500	189	257,371	198	297,383
Alberta	93	15	205,900	115	150,414	132	300,602
British Columbia	86	64	834,086	74	29,933	137	734,947
Yukon and N.W.T.	8	3	9,990	13	1,432	16	9,976
Totals, Main Plant	**647**	**895**	**11,787,039**	**513**	**994,571**	**1,411**	**10,564,161**
Auxiliary-Plant Equipment	...	...	...	149	248,982	146	215,920
Grand Totals, 1951	**647**	**895**	**11,787,039**	**662**	**1,243,553**	**1,557**	**10,780,081**
1952							
Main-Plant Equipment—							
Newfoundland	19	30	71,215	10	2,264	41	61,575
Prince Edward Island	6	5	369	14	21,040	18	17,207
Nova Scotia	46	60	144,390	20	110,149	80	215,478
New Brunswick	17	13	106,600	31	103,816	44	181,917
Quebec	97	291	6,679,023	17	5,580	313	5,698,555
Ontario	133	377	3,614,666	7	46,266	384	2,950,381
Manitoba	11	42	708,000	7	2,115	49	540,370
Saskatchewan	80	7	109,800	157	321,443	156	361,660
Alberta	86	15	205,900	116	161,239	132	310,511
British Columbia	59	64	897,075	26	15,536	91	798,856
Yukon and N.W.T.	8	4	13,800	10	912	14	12,538
Totals, Main Plant	**562**	**908**	**12,550,838**	**415**	**790,360**	**1,322**	**11,149,048**
Auxiliary-Plant Equipment	—	—	—	231	880,608	226	705,207
Grand Totals, 1952	**562**	**908**	**12,550,838**	**646**	**1,670,968**	**1,548**	**11,854,255**

Export and Import of Electric Power.—Electric energy is exported from Canada only under licence and an export tax of 0·03 cents per kilowatt hour is levied with some exceptions. The export duties for the years ended Mar. 31, 1950 to 1953, were $431,895, $608,602, $743,407 and $738,918, respectively.

Exports for the years 1950-53 are shown in Table **10**. There are also large interprovincial movements of electric energy from Quebec to Ontario, and smaller movements from Nova Scotia and Quebec to New Brunswick, Manitoba to Ontario, Saskatchewan to Manitoba and British Columbia to Alberta.

The water allowed to be diverted at Niagara Falls for power purposes was increased by 5,000 cu. feet per second to the Canadian side in November 1940, owing to a diversion of water from Long Lake and the Ogoki River from the James Bay watershed to the Great Lakes watershed. In 1941, a further increase of

9,000 c.f.s. to the Canadian plants and 12,500 c.f.s. to the United States plants was permitted, and in 1943 an additional 4,000 c.f.s. to Canadian plants, bringing the totals up to 54,000 c.f.s. for Canada and 32,500 c.f.s. for the United States. This increased water, with greater development of plants on the St. Lawrence River, made possible the increased export of both firm and secondary power to the United States (5,000 c.f.s. will produce about 150,000 h.p. at the Queenston, Ont., plant). During 1950-51, increased demands from domestic consumers and low water reduced the surplus energy available for export but exports increased in 1952 and decreased slightly in 1953.

10.—Electric Energy Exported from Canada, by Companies, and Imported from the United States, 1950-53

Company	1950	1951	1952	1953
	'000 kwh.	'000 kwh.	'000 kwh.	'000 kwh.
Exported to United States—				
Hydro-Electric Power Commission of Ontario	361,458	392,036	374,772	352,129
Hydro-Electric Power Commission of Ontario (surplus)	347,246	717,387	744,878	616,066
Canadian Niagara Power Company	264,955	303,660	321,188	316,641
Canadian Niagara Power Company (surplus)	35,171	37,966	93,218	69,899
Ontario and Minnesota Power Company	36,867	39,340	42,312	44,212
Maine and New Brunswick Electric Power Company	36,830	39,129	27,610	28,666
Maine and New Brunswick Electric Power Company (surplus)	4,086	2,113	4,956	7,439
British Columbia Electric Railway Company	191,878	188,186	209,982	308,695
Southern Canada Power Company	2,308	2,976	3,220	3,787
Southern Canada Power Company (surplus)	—	—	11,616	28,777
Quebec Hydro-Electric Commission	639,464	644,017	650,142	645,411
Fraser Companies, Limited	5,212	8,319	8,893	1,864
Detroit and Windsor Subway Company	317	325	352	360
Other	75	68	71	84
Totals, Exports	**1,925,867**	**2,375,522**	**2,493,210**	**2,424,030**
Imported from United States	**2,591**[r]	**8,956**[r]	**19,985**[r]	**178,799**

Subsection 2.—Ownership and Regulation of Central Electric Stations*

Water power is developed in Canada by provincial commissions, by municipalities and by private companies—hydro-electric plants. The first such provincial commission was formed in Ontario in 1906 to act as trustee for a group of municipalities to develop and distribute electricity. The Hydro-Electric Power Commission of Ontario now generates and purchases power, transmits it to rural and urban municipalities and serves large power customers. Similar commissions have been formed in most of the other provinces.

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* The information included under the provincial headings of this Subsection has been revised by the various provincial commissions or authorities concerned.

11.—Summary Statistics of Publicly Owned Central Electric Stations, 1943-52

Year	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main-plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1943	197	1,159,545	9,397,354	2,135,395	2,362,858
1944	202	1,484,784	14,910,198	3,092,295	3,340,268
1945	208	1,566,676	14,599,195	3,118,324	3,372,826
1946	203	1,650,739	14,739,271	3,274,484	3,523,463
1947	230	1,772,919	15,759,275	3,380,900	3,665,032
1948	242	1,884,642	16,692,388	3,632,636	3,993,323
1949[1]	259	2,033,418	17,686,684	3,784,484	4,208,495
1950	270	2,200,957	20,061,314	4,558,449	4,987,095
1951	270	2,315,309	24,380,802	4,955,247	5,648,638
1952	225	2,444,672	26,525,971	5,286,462	5,792,288

[1] Figures include Newfoundland since 1949.

A large portion of the power development in Quebec is connected with pulp and paper plants and with the aluminum industry. Such power plants are operated as separate organizations and deliver power to the parent companies at relatively low rates. Substantial blocks of power are also produced in Quebec for export to Ontario.

Table 12 shows statistics of municipally or publicly owned central electric stations, by province, for 1951 and 1952. Table 14 shows comparable statistics for commercial stations.

12.—Publicly Owned Central Electric Stations, by Province, 1951 and 1952

Year and Province or Territory	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main-plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1951					
Newfoundland	1	263	237	—	264
Prince Edward Island	1	2,435	8,526	—	4,190
Nova Scotia	30	58,497	349,873	95,980	119,032
New Brunswick	10	88,224	262,072	12,600	101,801
Quebec	23	435,689	7,462,343	1,446,935	1,446,935
Ontario	97	1,285,756	14,237,987	2,982,592	3,189,572
Manitoba	6	141,200	867,680	239,000	240,270
Saskatchewan	56	115,077	391,768	—	227,779
Alberta	9	107,649	362,679	—	116,726
British Columbia	35	80,407	407,365	170,600	194,009
Yukon and Northwest Territories	2	112	30.272	7,540	8,060
Canada, 1951	**270**	**2,315,309**	**24,380,802**	**4,955,247**	**5,648,638**
1952					
Newfoundland	2	964	3,375	—	2,264
Prince Edward Island	1	2,567	7,173	—	4,190
Nova Scotia	24	60,969	395,674	104,680	104,680
New Brunswick	11	93,469	310,098	12,600	115,161
Quebec	22	453,407	7,923,576	1,446,935	1,446,935
Ontario	92	1,352,337	15,478,630	3,221,592	3,222,072
Manitoba	8	153,643	1,030,681	315,000	316,270
Saskatchewan	41	128,234	453,956	—	272,301
Alberta	8	115,617	322,845	—	116,515
British Columbia	14	83,326	563,069	174,305	180,550
Yukon and Northwest Territories	2	139	36,894	11,350	11,350
Canada, 1952	**225**	**2,444,672**	**26,525,971**	**5,286,462**	**5,792,288**

Summary statistics of privately owned central electric stations are given for the years 1943 to 1952 in Table **13**.

13.—Summary Statistics of Privately Owned Central Electric Stations, 1943-52

Year	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main-plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1943	425	1,009,603	31,082,239	7,069,774	7,239,936
1944	424	753,239	25,688,581	6,175,674	6,373,523
1945	392	766,554	25,530,857	6,098,240	6,294,121
1946	397	826,091	26,997,716	6,104,383	6,301,996
1947	377	870,408	27,665,524	5,750,950	5,936,125
1948	393	937,385	25,697,293	5,837,670	6,045,218
1949[1]	391	1,042,951	26,731,889	6,188,921	6,429,303
1950	395	1,068,867	28,432,404	6,471,350	6,716,066
1951	377	1,124,441	30,471,042	6,831,792	7,132,972
1952	337	1,175,923	32,883,227	7,264,376	7,548,910

[1] Figures include Newfoundland since 1949.

The predominant position of Quebec in the electric-power field can be seen from the figures of Table 14. Of the total power generated in Canada by all central electric stations in 1952, 41 p.c. was generated by privately owned or commercial stations in the Province of Quebec; this percentage decreased from 57 in 1943 as a result of the transfer in 1944 of the Montreal Light, Heat and Power Company and the Beauharnois Power Company to the publicly owned Quebec Hydro-Electric Commission.

14.—Privately Owned Central Electric Stations, by Province, 1951 and 1952

Year and Province or Territory	Generating Power Plants	Customers	Electric Energy Generated	Power Equipment (main-plant only)	
				Water Wheels and Turbines	Total
	No.	No.	'000 kwh.	h.p.	h.p.
1951					
Newfoundland	18	38,311	172,199	71,215	71,215
Prince Edward Island	6	10,517	24,242	369	17,419
Nova Scotia	21	92,161	538,035	40,178	202,247
New Brunswick	6	27,065	494,015	89,000	90,255
Quebec	76	507,145	22,227,743	4,903,546	4,906,066
Ontario	44	39,878	1,747,069	393,648	440,373
Manitoba	3	52,968	1,696,857	355,500	356,345
Saskatchewan	62	11,675	587,005	106,500	136,092
Alberta	84	78,145	634,266	205,900	239,588
British Columbia	51	264,295	2,316,089	663,486	670,010
Yukon and Northwest Territories	6	2,281	33,522	2,450	3,362
Canada, 1951	**377**	**1,124,441**	**30,471,042**	**6,831,792**	**7,132,972**
1952					
Newfoundland	17	42,441	229,916	71,215	71,215
Prince Edward Island	5	10,545	28,706	369	17,219
Nova Scotia	22	97,449	569,097	39,710	149,859
New Brunswick	6	26,660	442,789	94,000	95,255
Quebec	75	533,857	24,189,302	5,232,088	5,237,668
Ontario	41	37,044	1,818,896	393,074	438,860
Manitoba	3	55,042	1,668,565	393,000	393,845
Saskatchewan	39	10,921	625,353	109,800	158,942
Alberta	78	84,642	851,157	205,900	250,624
British Columbia	45	274,900	2,424,192	722,770	732,061
Yukon and Northwest Territories	6	2,422	35,254	2,450	3,362
Canada, 1952	**337**	**1,175,923**	**32,883,227**	**7,264,376**	**7,548,910**

In 1952, all stations in Ontario produced a little more than one-half as much power as the Quebec stations. Of the total for Ontario stations 11 p.c. was produced by privately owned stations.

Because of the absence of free market determination of prices and regulation of services in an industry that is semi-monopolistic, regulation of electrical utilities has been attempted in most provinces. The governing bodies of the provincial electric-power commissions, their functions and activities are summarized by provinces in the following paragraphs. Certain privately owned utilities are also covered.

Newfoundland.—There are no publicly owned hydro-electric systems in Newfoundland. The largest water-power development in the Province is located at Deer Lake. The plant, which is operated by Bowater's Newfoundland Pulp and Paper Company Limited, has a total capacity of 150,000 h.p. This Company develops hydro-electric energy at Deer Lake mainly for its own use in the manufacture of pulp and paper and also supplies electric power to the Buchans Mining Company for its mining operations and to the Newfoundland Light and Power Company Limited which distributes electricity to consumers in Corner Brook and adjacent communities in the Bay of Islands sections.

The Anglo-Newfoundland Development Company Limited develops hydro-electric power at two plants situated at Grand Falls and Bishop's Falls with a total capacity of 59,900 h.p. The Company utilizes most of its hydro-electric power in the manufacture of pulp and paper and supplies light and power to the towns of Grand Falls, Bishop's Falls, Botwood and adjacent communities.

The Newfoundland Light and Power Company Limited has seven plants that develop hydro-electric energy with a total installed capacity of 55,400 h.p. It distributes electricity to the city of St. John's and the town of Bell Island and the iron-mining operations there.

The United Towns Electric Company Limited operates seven plants, of which five are located at Conception Bay and two on the Burin Peninsula. The Company sells light and power to communities on the Avalon and Burin Peninsulas and to the fluorspar mining operations at St. Lawrence on the Burin Peninsula. It developed 27,398,345 kwh. during 1953. The West Coast Power Company, a subsidiary of the United Towns Electric Company, operates a plant on Lookout Brook, a tributary of Flat Bay Brook which flows into St. George's Bay. It generated 15,166,800 kwh. in 1953.

Two small companies, the Clarenville Light and Power Company and the Union Electric Company, operate plants at Clarenville and Port Union, respectively.

Nova Scotia.—Legislation relating to the use of water power was first enacted in Nova Scotia in 1909 under "An Act for the Further Assistance of the Gold Mining Industry". In 1914, legislation was passed initiating the development of water power in the Province and this was carried on in an investigatory manner in co-operation with the Federal Government until 1919 when the Nova Scotia Power Commission was created under the Power Commission Act. Certain investigatory work is still carried on in Nova Scotia by the Federal Government in close association with the Commission. The control of the water resources of the Province is vested in the Crown and is administered under the provisions of the Nova Scotia Water Act of 1919. The Commission pays the regular fees for water rights.

The function of the Commission is to supply electric power and energy by the most economical means available. The Rural Electrification Act of 1937 greatly increased the possibilities for retail service by providing for financial assistance to equalize cost and revenue of extensions, the construction of which has been approved by the Governor in Council as qualifying under the Act. In 1941, an amendment to the Power Commission Act authorized the Commission, subject to the approval of the Governor in Council, to regulate and control the generation, transmission, distribution, supply and use of power in the Province.

Financially, the Commission is self-supporting, repaying borrowings from revenue. The balance sheet at Nov. 30, 1953, showed total fixed assets of $36,678,943 including work in progress amounting to $575,166. Current assets amounted to $596,508. Liabilities are shown as follows: fixed $30,084,340; current $1,621,145; contingency and renewal reserves $3,413,504; sinking fund reserves $5,761,883; and general reserves and special reserves $1,998,798.

The initial development of the Commission was an 800-h.p. installation on the Mushamush River which went into operation in 1921 and delivered 208,752 kwh. in the first complete year of operation. Succeeding years showed a marked growth in installed capacity, reaching 101,450 h.p. in hydraulic turbines, 3,167 h.p. in diesel units and 21,125 kw. in steam turbines by Nov. 30, 1953, with a total generation for that year of 417,219,885 kwh.

The territory of the Commission extends over the entire Province and embraces nine systems which include 25 generating stations and 4,114 miles of transmission and distribution lines, through which 51 wholesale and 27,246 retail customers received 402,928,690 kwh. during the year ended Nov. 30, 1953.

The installed capacity and annual output of the various systems of the Nova Scotia Power Commission are given in Table **15**.

15.—Capacity and Output of the Nova Scotia Power Commission, Year Ended Nov. 30, 1953

Systems	First Year of Operation	Installed Capacity		Annual Generation	
		Initial	1953	Initial	1953
		h.p.	h.p.	kwh.	kwh.
Hydro					
Mushamush	1921	800	330	208,752	912,100
St. Margaret	1922	10,700	15,700	19,538,000	31,210,700
Sheet Harbour—					
Malay Falls	1924	5,550	5,550	6,536,860	11,223,313
Ruth Falls	1925	6,290	10,590	7,361,117	33,622,030
Liscomb	1951	—	700	2,502,700	3,676,375
Mersey—					
Original development	1928	29,400	28,000	85,863,390	110,807,000
Cowie Falls	1938	10,200	10,200	34,866,000	37,851,000
Deep Brook	1950	12,800	12,800	50,018,000	48,534,000
Tusket	1929	2,820[1]	2,820[1]	3,680,540	10,999,127
Roseway	1930	560	1,060	365,600	4,089,700
Markland—					
Harmony	1943	1,200	1,200	2,883,587	4,196,625
Gulch	1952	8,500	8,500	17,843,117	17,843,117
Antigonish	1931[2]	..	..	389,520[3]	..
Barrie Brook	1940	500	500	1,780,734	2,371,420
Dickie Brook	1948	3,500	3,500	8,920,000	8,347,200
Totals	...	...	**101,450**	...	**325,683,707**
Thermal					
Canseau Diesel	1937	72	3,167	21,650	4,081,978
Canseau Steam	1945	1,125[4]	1,125[4]	4,437,280	4,442,200
Sheet Harbour Steam	1951	10,000[4]	20,000[4]	67,158,500	83,012,000
Grand Total	...	...	...	...	**417,219,885**

[1] Minimum head. [2] Distribution only. [3] Purchased energy. [4] Rated in kilowatts.

New Brunswick.—The New Brunswick Electric Power Commission was incorporated under the Electric Power Act, 1920. Generating stations owned by the Commission are as follows:—

Plant	*Type*	*Capacity*
		h.p.
Musquash	Hydro	9,320
Tobique	Hydro	27,000
Grand Lake	Steam	58,700
Saint John	Steam	21,500
Chatham	Steam	16,800
St. Stephen	Diesel	2,800
Campobello	Diesel	300
Grand Manan	Diesel	900
Shippegan	Diesel	2,500
St. Quentin	Diesel	750
Total Capacity		140,570

All generating units, with the exception of diesel plants at St. Quentin and Grand Manan, are interconnected in a Province-wide grid system.

The statistical information given in Table **16** shows the growth of the Commission's undertakings since 1949.

16.—Growth of the New Brunswick Electric Power Commission, Years Ended Oct. 31, 1949-50 and Mar. 31, 1951-53

Item	1949	1950	1951[1]	1952	1953
High-voltage transmission line.......miles	566	646	694	749	827
Distribution line........ "	4,334	5,255	5,623	5,938	6,245
Direct customers........ No.	44,822	52,255	53,777	57,016	61,054
Plant capacities......... h.p.	87,295	87,295	87,095	103,310	140,570
Power generated......... kwh.	222,951,910	242,302,755	114,373,065	282,405,310	321,232,150
Capital invested......... $	27,175,441	31,357,828	33,857,407	38,286,374	48,120,336
Revenue.............. $	4,073,979	4,768,746	2,385,054	6,255,615	7,059,588

[1] Five months—Nov. 1, 1950, to Mar. 31, 1951. The Commission's fiscal year-end changed in 1951 from Oct. 31 to Mar. 31.

Quebec.—*The Quebec Streams Commission.*—Created by S.Q. 1 Geo. V, c. 5, and given additional powers by 3 Geo. V, c. 6 (R.S.Q. 1925, c. 46) and 20 Geo. V, c. 34, the Quebec Streams Commission was authorized to ascertain the water resources of the Province, to make recommendations regarding their control, and to construct certain storage dams and operate them so as to regulate the flow of streams. It has assisted companies engaged in such work by the systematic collection of data on the flow of the principal rivers and on meteorological conditions, by investigation of numerous water-power sites and determination of the longitudinal profile of a large number of rivers, but mainly by the regulation of the flow of the principal power streams through the construction of storage dams.

From 1912 to 1925, a number of storage reservoirs were built or acquired by the Commission, charges being made to benefiting companies to cover interest and amortization on the capital invested as well as the cost of operation. Since 1925, companies or persons have availed themselves of the latitude given them by R.S.Q. 1925, c. 46, to build the necessary dams; such storages have been transferred to and are operated by the Commission, the cost of operation only being charged annually to the interested companies or persons. The Commission now controls and operates 28 storage reservoirs in the Province.

Among the rivers controlled by the Commission, either by means of dams on the rivers or by controlling the outflow of lakes at the headwaters, are: the St. Maurice, now developing 1,538,150 h.p.; the Gatineau, 528,000 h.p.; the Lièvre, 274,000 h.p.; the St. Francis, 100,000 h.p.; the Chicoutimi, 41,400 h.p.; the Au Sable, 33,200 h.p.; and the Métis, 15,700 h.p. The Commission also operates nine reservoirs on North River, two in the watershed of the Ste. Anne-de-Beaupré River, and one at the outlet of Lake Morin, on Rivière-du-Loup (lower).

Reservoirs not Controlled by the Quebec Streams Commission.—Among storage-reservoirs not controlled or operated by the Commission are: the Lake St. John, the Lake Manouane and Passe Dangereuse on the Peribonca River, and the Onatchiway on the Shipshaw River; the Témiscouata Lake on Madawaska River, controlled by the Gatineau Power Company; Memphremagog Lake on the Magog River, controlled by the Dominion Textile Company; Témiscamingue and Quinze Lakes on the Ottawa River, controlled by the Federal Department of Public Works; Kipawa Lake on the Ottawa River, controlled by the Gatineau Power Company; and Dozois Lake on the upper Ottawa River, controlled by the Quebec Hydro-Electric Commission.

Power developments on the Saguenay River, benefiting from the Peribonca and Lake St. John reservoirs, have a total capacity of 1,950,000 h.p. now that the Chute-à-Caron (Shipshaw) project has been completed.

The Quebec Hydro-Electric Commission.—The Quebec Hydro-Electric Commission was established by S.Q. 8 Geo. VI, c. 22, with the object of supplying power to the municipalities, industrial and commercial undertakings and to citizens of the Province of Quebec at the lowest rates consistent with sound financial administration.

On Apr. 15, 1944, in accordance with the provisions of this Act, the Commission took over: *(a)* the system of Montreal Light, Heat and Power Consolidated for the generating and distribution of electricity; *(b)* the undertaking of the Montreal Island Power Company for the generating and distribution of electricity; and *(c)* all the shares of the capital stock of the Beauharnois Light, Heat and Power Company. Thus, the Quebec Hydro-Electric Commission now controls, among other assets, the following hydro-electric plants:*—

Plant	*River*	*Installed Capacity*
		h.p.
Cedars	St. Lawrence	206,400
Sault-au-Recollet	Rivière-des-Prairies	45,000
Beauharnois	St. Lawrence	1,400,000
Rapid VII	Upper Ottawa	64,000
Rapid II	Upper Ottawa	32,000

The Commission operates a public utility system which supplies electric light and power requirements to Greater Montreal and surrounding districts, embracing a population of nearly 2,000,000. From the Cedars plant, electric energy is supplied to the Aluminum Company of America at Massena, N.Y., and through Beauharnois Light, Heat and Power Company power is sold to The Hydro-Electric Power Commission of Ontario. Sales involved are in the neighbourhood of 100,000 h.p. to Massena, N.Y., and 250,000 h.p. to Ontario.

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* The Commission also purchases 135,000 h.p. from the Shawinigan Water and Power Company.

17.—Growth of the Quebec Hydro System, 1944-53

NOTE.—Figures for the years 1935-43 will be found in the 1950 Year Book, p. 572.

Year	Municipalities Served	Customers Served	Power Distributed	
			Total	Primary
	No.	No.	h.p.	h.p.
1944	61	298,767	1,060,000	897,000
1945	61	305,049	1,045,000	883,000
1946	61	309,022	1,085,000	947,000
1947	61	318,984	1,127,000	980,000
1948	61	330,799	1,202,000	1,034,000
1949	61	349,347	1,233,000	1,119,000
1950	64	368,026	1,296,000	1,182,000
1951	66	387,218	1,312,000	1,312,000
1952	67	400,779	1,620,000	1,462,000
1953	67	413,439	1,748,000	1,625,000

18.—Distribution of Quebec Hydro Primary Power, by Customer Group, 1948-53

(Coincident with Montreal System peak)

System	1948	1949	1950	1951	1952	1953
	h.p.	h.p.	h.p.	h.p.	h.p.	h.p.
Montreal System	620,000	669,000	730,000	803,000	873,000	997,000
Beauharnois Local System	36,000	70,000	65,000	171,000	189,000	213,000
Beauharnois 25-cycle System (H.E.P.C. of Ontario)	250,000	250,000	250,000	250,000	250,000	250,000
Massena System	128,000	130,000	137,000	80,000	135,000	142,000
Shawinigan System	—	—	—	8,000	15,000	23,000
Totals	**1,034,000**	**1,119,000**	**1,182,000**	**1,312,000**	**1,462,000**	**1,625,000**

In addition to these generating and distributing systems, the Quebec Hydro-Electric Commission owns the 64,000-h.p. upper Ottawa River plant at Rapid VII, the 32,000-h.p. Rapid II plant and also the Dozois Reservoir. Average primary power capacities for this Northern Quebec System (Cadillac-Noranda district) are as follows: 1948, 21,270 h.p.; 1949, 34,790 h.p.; 1950, 35,500 h.p.; 1951, 30,550 h.p.; and 1952, 29,200 h.p.

Ontario.—The Hydro-Electric Power Commission of Ontario is a corporate body administering a province-wide enterprise for the production and distribution of electric power. The three members of the Commission are appointed by the Lieutenant-Governor in Council, who may also name one of the members to be Chairman. One commissioner must be a member, and two may be members, of the Executive Council of the Province of Ontario.

The Commission was created in 1906 by an enactment of the Ontario Legislature after consideration of recommendations made by advisory commissions. These had been appointed in response to public demand that the water powers of Ontario should be conserved and developed for the benefit of all the people of the Province.

The Commission operates under the authority of the Power Commission Act (7 Edw. VII, c. 19) passed in 1907 as an amplification of the Act of 1906 and subsequently modified by numerous amending Acts (R.S.O., 1950, c. 281). It is a separate entity, a self-sustaining public concern endowed with broad powers to produce, buy and deliver electric power, and to perform certain regulatory functions with respect to the municipal electrical utilities that it serves. The enterprise represented by the Commission is generally known as the Ontario Hydro.

Initially, the undertaking proposed to purchase a block of 100,000 h.p. from the Ontario Power Company Limited at Niagara Falls and to distribute this to 13 municipalities which had signed the original contracts with the Commission to take power at cost. Construction of a transmission system to distribute power to the member municipalities was begun in 1909 and, by the end of the following year, power was being supplied to several of them. The Commission also built a short transmission line and a substation to serve Port Arthur with power purchased from the Kaministiquia Power Company. These two pioneer systems eventually grew into the Southern Ontario and the Thunder Bay Co-operative Systems.

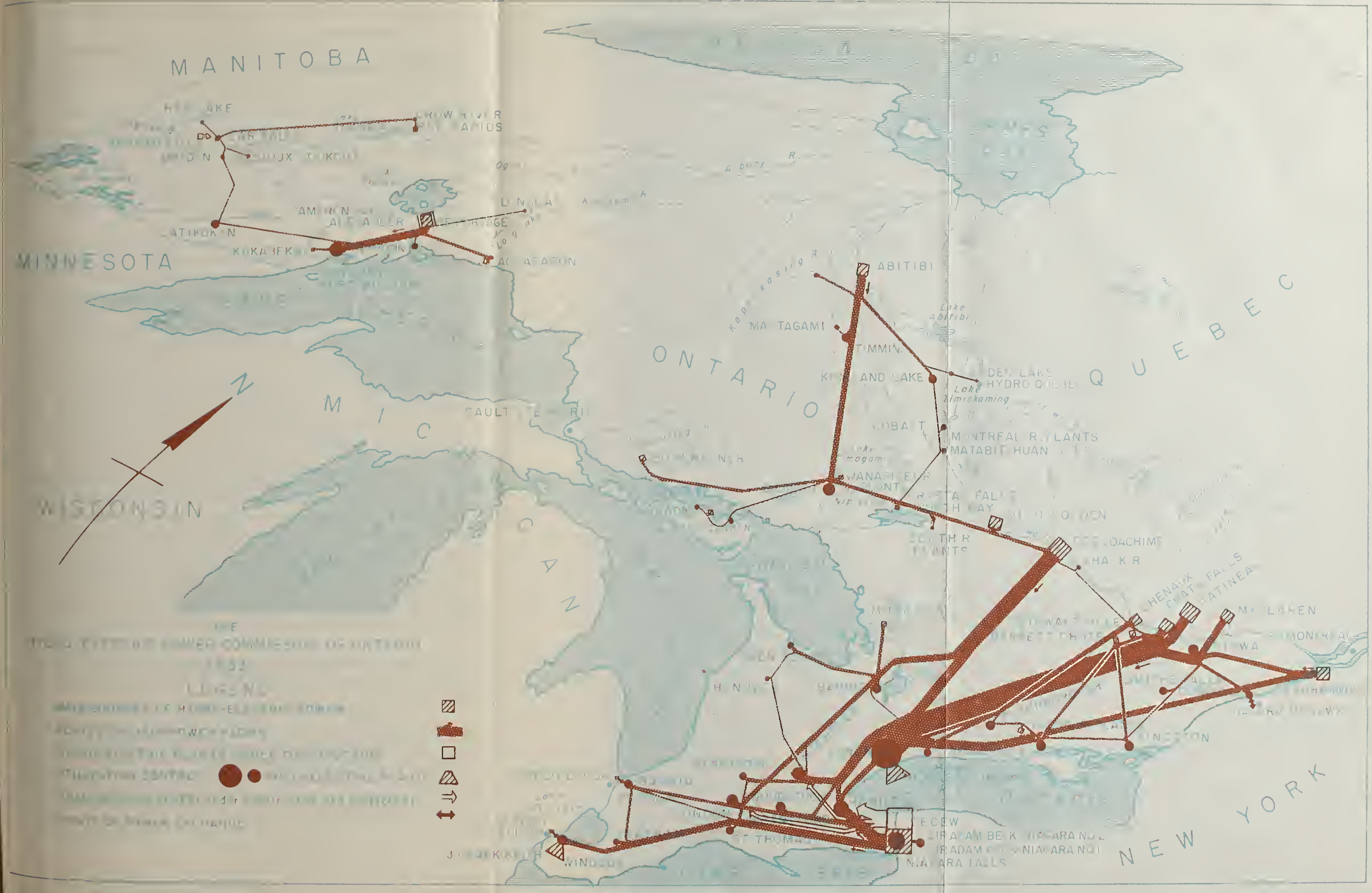
The Southern Ontario System developed through a series of consolidations of various smaller systems. The establishment of the original Niagara System was followed in 1911 by the formation of the Severn System and subsequently of other systems to serve groups of municipalities in various sections of the Province. In 1924, the Severn and two other systems were consolidated to form the Georgian Bay System and in 1929 and 1930 a consolidation of four systems created the Eastern Ontario System. In 1944, the Southern Ontario System came into being through the consolidation of the Niagara, Georgian Bay, and Eastern Ontario Systems.

The Commission continued to operate the Thunder Bay System in the northern part of the province and, in addition, it undertook during the 1930's to operate, in trust for the provincial government, a group of unconnected systems serving mainly mining and pulp and paper industries, and known as the Northern Ontario Properties. In 1945, its services in northern Ontario were further extended by the purchase of the power system of the Northern Ontario Power Company Limited. On Jan. 1, 1952, the Northern Ontario Properties and the Thunder Bay System were merged for financial and administrative purposes and the consolidation continues to be known as the Northern Ontario Properties.

In the Southern Ontario System, and in the Northern Ontario Properties as at present constituted, the Commission's customers include municipal electrical utilities, certain large industrial users, and retail customers in the Rural Power District of the Province and in a small group of municipalities known as local systems.

The Southern Ontario System serves the older and more populous part of Ontario lying south of a line drawn from Mattawa on the upper Ottawa River approximately west to Georgian Bay. Primarily, it serves a group of 314 municipalities receiving power at cost under contracts established according to the provisions of the Power Commission Act. It is, therefore, referred to as a co-operative system.

The Northern Ontario Properties is not a co-operative system in the same sense, though it continues to serve, at cost, the municipalities that were formerly members of the Thunder Bay Co-operative System. It also continues to operate, in trust for the Province, a large part of the facilities serving the industrial and mining areas of northern Ontario. The Northern Ontario Properties comprises two divisions, the Northeastern and the Northwestern Divisions, which in themselves are integrated operational and administrative units. The two Divisions together serve the territory extending in the northern part of the Province from the Quebec boundary to the boundary of Manitoba. There is no power connection between the Divisions, but since 1950 the Northeastern Division has been interconnected with the Southern Ontario System.

MANITOBA
MINNESOTA
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MATABITCHUAN
Lake Abitibi
Lake Timiskaming
HYDRO QUEBEC
SAULT STE MARIE
DES JOACHIMS
CHENAUX
CHATS FALLS
GATINEAU
MACLAREN
MONTREAL
KINGSTON
ST THOMAS
WINDSOR
SIR ADAM BECK NIAGARA NO. 1
SIR ADAM BECK NIAGARA NO. 2
NIAGARA FALLS
THE
HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO
LEGEND
HYDRO-ELECTRIC

The growth of Ontario Hydro's resources, both physical and financial, reflects the remarkable industrial and social development of the Province. In 1914, the Commission purchased its first generating station, Big Chute on the Severn River. Later in the same year, the first Commission-built generating station at Wasdell Falls, also on the Severn River, was placed in service. The program of purchase and construction of generating stations thus launched reached a climax in the construction of the great Queenston-Chippawa development, later renamed Sir Adam Beck-Niagara Generating Station No. 1 in honour of the first Chairman of the Commission. This station first delivered power in 1922. Yet, commencing four years later, the Commission found it necessary to negotiate for the extensive purchase of power from large Quebec suppliers in order to satisfy Ontario's steadily growing power demands.

In 1953, primary and secondary load carried reached a maximum of 3,480,646 kw., and during the year a total of 20,912,445,364 kwh. was supplied from all the Commission's resources, generated and purchased.

During the past ten years, growing demands for power have taxed the capacities of the Commission's resources, and only by a most aggressive program of new construction has it been possible to keep pace with the increased requirements. With due allowance for revisions in the capacity of various sources, this program had served to bring the dependable peak capacity at the end of 1953 to 3,565,350 kw., an increase of 1,627,850 kw. since 1945. The combined output of the Otto Holden, Des Joachims, and Chenaux Generating Stations on the upper Ottawa River accounts for 710,000 kw. of this additional power. Other notable hydro-electric developments have been the George W. Rayner Generating Station in Ontario's northeastern mining area and Pine Portage Generating Station in the Northwestern Division. In 1953, a program of construction and expansion was completed at the large fuel-electric stations at Toronto and Windsor, named the Richard L. Hearn Generating Station and J. Clark Keith Generating Station, respectively. In the operation of these two stations, the Commission made its initial entry into fuel-electric generation on a large scale. In addition, the Commission, in 1953, established interconnections with the Detroit Edison Company at Windsor, Ont., and near Sarnia. Through these facilities mutual assistance may be provided at times of emergency. Furthermore, each of the interconnected systems will be able to take advantage of economies brought about by the exchange of any surplus energy that may from time to time become available. During 1953, the interconnecting facilities made a significant contribution towards meeting primary power and energy requirements in the Southern Ontario System and the Northeastern Division of the Northern Ontario Properties.

During 1953, the major generation projects under construction were the new Manitou Falls Generating Station on the English River, the addition of two units at Pine Portage Generating Station on the Nipigon River, and the Sir Adam Beck-Niagara Generating Station No. 2, near Queenston on the Niagara River.

By far the largest of these projects is Sir Adam Beck-Niagara Generating Station No. 2. Initially, 12 units at the station will have an installed capacity of 900,000 kw. In order, however, to make maximum use of the water made available under the Niagara Diversion Treaty of 1950, plans were made for the subsequent incorporation of a pumped-storage installation and for the ultimate addition of four more units at the station itself, which will bring the total installed capacity of the project to 1,370,000 kw.

From the intake on the Niagara River, about two miles above Niagara Falls, water will be conveyed for about five miles by two hydraulic pressure tunnels that pass under the city of Niagara Falls and reach a maximum depth of over 300 ft. below the surface. From the point where the tunnels return to the surface, the water will flow through a $2\frac{1}{4}$-mile canal to the forebay which adjoins the forebay of the Sir Adam Beck-Niagara Generating Station No. 1 immediately to the north. To the north of the canal will be the pumped-storage reservoir, some 700 acres in extent and capable of storing 650,000,000 cu. ft. of water. At times of low demand, water will be raised by reversible pumps to a level varying from 60 to 86 ft. above the canal. At peak demand periods, it will return to the forebay through the pumps, functioning as turbines, and may provide up to 170,000 kw. at the same time augmenting the flow to the two Sir Adam Beck-Niagara Generating Stations. Thus, additional capacity can be made available at time of system peak, and fuller use can be made of all generating units at times of high demand, particularly when restrictions on the use of water would otherwise prevent the operation of generating facilities to capacity. Provision has been made in the headworks and in the widening of the canal itself for the eventual installation of the four additional units, when required, at Sir Adam Beck-Niagara Generating Station No. 2.

Acting upon the recommendations of the International Joint Commission, and working in close liaison with the United States Army Corps of Engineers, Ontario Hydro in 1953 began the construction of remedial works above the Falls on the Canadian side of the Niagara River. The works include a 1,500-foot-long control dam at Grass Island Pool, and require both the excavation of channels and the filling in of the extremities of the crest on both sides of the cataract. The purpose is to enhance the scenic beauty of the Falls and reduce erosion at the centre by creating a more uniform flow over the 2,600-foot crestline of the cataract, and at the same time to contribute to the most effective use of water for power production.

The addition of two units at Pine Portage Generating Station now being undertaken will complete the installations for which the station was originally designed and will bring the total dependable peak capacity of the four units to 118,300 kw. Construction of the new hydro-electric station at Manitou Falls on the English River was begun in 1953 and will have three units with a total dependable peak capacity of 42,100 kw.

The development of the International Rapids Section of the St. Lawrence River for power was also carried forward during 1953 when the Federal Power Commission of the United States granted a licence to the Power Authority of the State of New York to carry out the United States part of the work. The last legal obstructions to the undertaking were overcome in June 1954. (*See* special article, The St. Lawrence Power Project, pp. 549-553).

In October 1953, the complex program of frequency standardization entered its fifth year. By the end of the year, standardization operations had been completed for well over a third of the estimated number of customers requiring the standardization of equipment. The standardization operation had been completed in 84 municipalities and part of the work had been done in 26 others. Sixteen rural operating areas had been completely standardized and part of the work had been done in 15 other rural operating areas.

The basic principle governing the financial operations of the Commission is that electrical service is provided by the Commission to the municipalities, and by the municipalities to their customers, at cost. Cost includes all charges for operating and maintenance, for interest on capital investment, and reserves covering depreciation, contingencies and obsolescence, and for the stabilization of rates. It also includes a reserve for a sinking fund to retire the Commission's capital debt.

The undertaking from its inception has been self-supporting, apart from the assistance given by the provincial government which provides 50 p.c. of the capital cost of rural distribution facilities in pursuance of its long-established policy of assisting agriculture. The Province also guarantees the payment of principal and interest of all bonds issued by the Commission and held by the public.

The undertaking as a whole involves two distinct phases of operations as follows: The *first* phase of operations is the provision of the power supply—either by generation or purchase—and its transformation, transmission and delivery in *wholesale* quantities to municipal electrical utilities, certain large industrial customers, and rural operating areas. This phase of operations is performed by The Hydro-Electric Power Commission of Ontario. The *second* phase of operations is the *retail* distribution of electric energy. In most cities and towns, in many villages, and in certain thickly populated areas of townships, retail distribution of electric energy is conducted by municipal commissions under the general supervision of The Hydro-Electric Power Commission of Ontario as provided for in The Power Commission Act and the Public Utilities Act. These local commissions own and operate their own distribution facilities. The Hydro-Electric Power Commission of Ontario owns the distribution facilities and conducts retail distribution in a small number of municipalities through what are called local systems. Throughout most of rural Ontario, the Commission, on behalf of the respective townships, operates the distribution facilities and attends to all physical and financial operations connected with the retail distribution of energy to the customers in the rural operating areas. Since 1944, the rate structure applying to the Commission's farm, hamlet, commercial and summer service customers has been uniform throughout the Province.

The balance sheet of the Commission shows that gross investment in fixed assets at Dec. 31, 1953, amounted to $1,354,642,244, against which there was an accumulated reserve for depreciation of $151,285,057. Included in the gross investment is an amount representing rural assets under administration totalling $167,009,485. Of this amount, $83,222,684 represents the assistance given by the Province of Ontario for rural construction. The Commission's assets, allowing for the deduction of accumulated depreciation, stood at $1,491,302,267.

The 332 municipal electrical utilities, which operate under cost or fixed-rate contracts with the Commission and distribute power in 337 municipalities in the Province, had a gross investment in fixed assets amounting to $214,595,383. The provision for depreciation amounted to $54,282,571. Municipal assets, after deduction of this depreciation reserve, were $336,613,672, of which $140,068,857 represented the equity of the municipalities in the Commission's Systems.

The following tables give statistics of resources generated and purchased, development program, distribution and service of the Commission.

19.—Resources of The Hydro-Electric Power Commission of Ontario Generated and Purchased (All Systems), December 1952 and 1953

Year and System	Commission's Generating Stations				Power Purchased	
	Hydro-electric[1]		Fuel-electric[1]			
	kw.	h.p.	kw.	h.p.	kw.	h.p.
December 1952—						
Southern Ontario System	1,659,150	2,224,062	444,000	595,174	687,100	921,045
Northern Ontario Properties—						
Northeastern Division	301,600	404,290	300	402	—	—
Northwestern Division	259,800	348,257	—	—	1,400	1,877
Totals, Resources	**2,220,550**	**2,976,609**	**444,300**	**595,576**	**688,500**	**922,922**
December 1953—						
Southern Ontario System	1,671,150	2,240,147	652,000	873,995	681,100	913,003
Northern Ontario Properties—						
Northeastern Division	297,700	399,062	500	670	—	—
Northwestern Division	261,100	350,000	—	—	1,800	2,413
Totals, Resources	**2,229,950**	**2,989,209**	**652,500**	**874,665**	**682,900**	**915,416**

[1] Dependable peak capacity—the amount of power subject to periodic change as equipment and water conditions vary, which the source is expected to be able to supply at the time of the system's peak demand. For the Commission-owned or Commission-operated generating stations, it is presumed that all units are available and that the supply of water is normal. Contractual stipulations govern the capacities of sources of purchased power.

20.—Summary of Development Program of The Hydro-Electric Power Commission of Ontario (1945-58), as at Dec. 31, 1953

System and Development	In Service	Dependable Peak Capacity
		kw.
Southern Ontario System—		
DeCew Falls (extension)—Niagara Region	September 1947	57,000
Stewartville—Madawaska River	September 1948	63,000
Additional power purchase contract—Polymer Corporation	November 1948	22,000
Emergency fuel-electric units	January 1949-April 1950	47,000
Des Joachims—Ottawa River	July 1950-February 1951	380,000
Chenaux—Ottawa River	November 1950-September 1951	120,000
Richard L. Hearn—Toronto	October 1951-June 1953	388,000[1]
J. Clark Keith—Windsor	November 1951-October 1953	264,000[2]
Otto Holden—Ottawa River	January 1952-April 1953	210,000
Sir Adam Beck-Niagara G.S. No. 2—Niagara River (12 units)	1954-56	900,000[3]
Pumped-storage scheme	1957	170,000[2]
Northern Ontario Properties—		
Northeastern Division—		
George W. Rayner—Mississagi River	July 1950	47,000
Northwestern Division—		
Ear Falls (extension)—English River	June 1948	6,000
Aguasabon—Aguasabon River	October 1948	44,000
Pine Portage—Nipigon River	July 1950—58,700 1954 —59,600	118,300
Manitou Falls—English River	1956	42,100

[1] Installed capacity. When all four units are operating at 60 cycles, installed capacity will be 400,000 kw. [2] Installed capacity. [3] Installed capacity—four more main generating units to be added as required; ultimate capacity, 1,200,000 kw.

21.—Distribution of Power to Systems of The Hydro-Electric Power Commission of Ontario, Years Ended Oct. 31, 1948-49 and Dec. 31, 1950-53

Note.—Peak load generated and purchased, primary and secondary, in terms of generation.

System	1948	1949	1950[1]	1951	1952	1953
	kw.	kw.	kw.	kw.	kw.	kw.
Southern Ontario System	1,542,975	1,743,973	2,210,929	2,425,909	2,798,476	2,909,190
Northern Ontario Properties—						
Northeastern Division	194,932	213,718	255,406	273,148	283,958	309,100
Northwestern Division	149,410	192,540	248,230	246,933	247,852	262,356
Totals	**1,887,317**	**2,150,231**	**2,714,565**	**2,945,990**	**3,330,286**	**3,480,646**

[1] Owing to the change in the Commission's fiscal year to coincide with calendar year, figures shown here for 1950 cover the 14 months ended Dec. 31, 1950.

22.—Growth of The Hydro-Electric Power Commission of Ontario, Years Ended Oct. 31, 1944-49 and Dec. 31, 1950-53

Year	Municipalities Served	Ultimate Customers Served Directly or Indirectly	Total Power Distributed[1]	Assets of Commission and Municipal Utilities
	No.	No.	kw.	$
1944	904	818,085	1,802,454	486,671,191
1945	922	869,712	1,939,505	524,839,263
1946	924	910,563	1,935,972	549,680,339
1947	944	952,853	2,003,139	610,133,232
1948	970	1,004,127	1,887,317	708,708,622
1949	1,017	1,078,221	2,150,231	898,466,484
1950[2]	1,132	1,187,117	2,714,565	1,080,200,039
1951	1,175	1,249,366	2,945,990	1,261,739,406
1952	1,244	1,317,249	3,330,286	1,442,511,467
1953	1,279	1,389,750	3,480,646	1,687,847,082

[1] Sum of the maximum 20-minute coincident peak loads (primary plus secondary) of each of the systems operated by the Commission, given in terms of net output of the sources of supply to each system for the last month of each fiscal year. [2] Owing to the change in the Commission's fiscal year to coincide with the calendar year, figures shown here for 1950 cover the 14 months ended Dec. 31, 1950.

Manitoba.—The Manitoba Power Commission was established in 1919 for the purpose of distributing electric energy, both wholesale and retail, throughout the Province, with the exception of the Greater Winnipeg area. The utility currently operates under authority of an Act respecting the Manitoba Power Commission (R.S.M. 1940, c. 166), as amended.

The Commission's supply of electric energy for distribution is purchased from the Winnipeg Electric Company at various points, chiefly at or near the city of Winnipeg. Arrangements for the Commission's purchase of power are contained in the Seven Sisters Agreement of 1928 between the Province of Manitoba and the Winnipeg Electric Company. The Commission has gradually acquired practically all of the municipally owned and privately owned generating plants operating within its jurisdiction and has spread a network of transmission lines across the Province. All energy distributed is now generated by hydro power.

The Commission's program, started in the 1930's and designed to bring hydroelectric power at uniform service rates to all rural centres of 20 or over population, is now virtually complete and currently serves 481 centres. In 1942, the Manitoba

Electrification Enquiry Commission was appointed by the Provincial Government to study the feasibility of widespread farm electrification in the Province. It was concluded that, with the Manitoba Power Commission's network of transmission lines as a source of supply and with the economy in design of farm lines that had been worked out, it would be practicable to bring the benefits of hydro-electric power to over 90 p.c. of the farms in the Province, provided the farmers themselves were prepared to assist in certain organizational and operational matters. A test program undertaken in 1945 proved successful and, thereafter, the Commission conducted annual programs of farm electrification. By 1948, the Commission's annual goal of 5,000 farms was achieved and the program has proceeded at that rate ever since. Manitoba's farm electrification project on an area-coverage basis is now complete. The Manitoba Power Commission has connected electrical service to more than 39,000 farms, 75 p.c. of the Province's total. Over 90 p.c. of the citizens of the Province are now in areas where central electric station power is available to them. In all, the Commission now serves more than 95,000 customers and this figure will exceed 100,000 during 1954. The only farms remaining to be served are those in isolated pockets that may now be feasibly added to the Commission's system and farmers in previously-energized areas who have not yet availed themselves of the opportunity of taking service.

Saskatchewan.—Saskatchewan Power Corporation, established Feb. 1, 1949, and operating under the provisions of the Power Corporation Act 1950 (Statutes of Sask. 1950, c. 10), as amended, succeeded the Saskatchewan Power Commission which operated from Feb. 11, 1929, to Jan. 31, 1949. The main functions of the Saskatchewan Power Corporation are the generation, transmission, distribution, sale and supply of electric energy and steam. It is also authorized to produce or purchase, and to transmit, distribute, sell and supply natural or manufactured gas into which field the Saskatchewan Power Corporation stepped in 1952.

Particulars of the operations of the Saskatchewan Power Commission during the period 1929-48 and of the operations of the Saskatchewan Power Corporation during 1949-52 are given in earlier editions of the Year Book.

The Saskatchewan Power Corporation is experiencing extensive growth similar to that of its predecessor—Saskatchewan Power Commission. In 1953 the Corporation served 628 urban communities (with six customers and more) in retail sales and three urban communities (Saskatoon, Swift Current and Battleford) in bulk sales. Its activity is extended to the entire province with the exception of such cities as Regina and Weyburn which own and operate municipal plants and distribution systems, and Moose Jaw where the local plant and distribution system is owned and operated by National Light and Power Co. Limited. A certain number of small communities, the largest of them being the town of Kamsack, are not as yet served by the Saskatchewan Power Corporation. Some of these utilities, mostly privately owned, were taken over by the Corporation in 1953.

At the end of 1953 the Corporation served 122,676 customers. Of this total 22,570 customers were located in communities which were supplied with power in bulk sales and 100,106 customers were Saskatchewan Power Corporation's retail customers. The latter group comprised 82,591 customers in the communities considered as urban and 17,515 customers were classified as rural, predominantly farms. During 1953 all customers absorbed 398,211,673 kwh. of which 359,028,165 kwh.

were generated in Corporation plants and 39,183,508 kwh. were purchased in bulk from Regina and National Light and Power utilities. Total invested capital of the Corporation at the end of 1953 (including gas distribution) amounted to $49,900,004.

During 1953 the Saskatchewan Power Corporation owned and operated four steam generating plants (at Estevan, North Battleford, Prince Albert, Saskatoon) and 10 diesel plants with capacities over 500 kw. each (at Assiniboia, Hudson Bay, Maple Creek, Meadow Lake, Moosomin, Shaunavon, Swift Current, Unity, Wynyard and Yorkton). The total available capacity of the Corporation in generating plants at the end of 1953 was assessed at 115,535 kw., of which 97,950 kw. was located in steam plants and 17,585 kw. in diesel plants.

At the end of 1953 the Saskatchewan Power Corporation owned and operated 18,256 miles of transmission and rural lines. Of this total, 5,205 miles of line were added to the system in 1953. They comprise 104 miles of 69,000 volt-line (Kerrobert-Kindersley and Estevan-Weyburn), 253 miles of 24,000 volt-line (Ogema-Ormiston, Kennedy-Wawota, Revenue-Landis, Gravelbourg-Bateman, Canwood-Big River, Unity-Vera and minor projects), and 4,848 miles of 13,800 volt-line in connection with rural electrification. Large substations were built in 1953 with the total capacity of 12,000 kva. (at Weyburn, Battleford, Unity and Yorkton).

23.—Growth of Saskatchewan Power Corporation (formerly Commission), 1945-53

NOTE.—Figures for 1929-33 are given at p. 499 of the 1947 Year Book, and for 1934-44 at p. 578 of the 1950 edition.

Year	Communities Served in Bulk and Retail Sales	Individual Customers in Communities Served	Power Distributed	Revenue
	No.	No.	kwh.	$
1945	150	40,968	106,539,448	2,677,289
1946	229	45,495	118,990,127	3,141,652
1947	320	63,805	160,420,859	4,442,507
1948	366	71,009	186,834,305	5,058,142
1949	420	78,389	202,135,947	5,629,372
1950	454	84,361	235,926,656	6,363,597
1951	535	93,923	278,826,919	7,159,876
1952	582	107,942	332,674,176	8,553,619
1953	631	122,676	398,211,673	10,363,752

Alberta.—Public ownership of power-generating and -distributing systems in Alberta is confined to certain urban municipalities. The regulatory authority over privately owned systems is the Board of Public Utility Commissioners, which has jurisdiction over the distribution and sale of electricity. The Board has power to hold investigation upon complaint made either by a municipality or by a utility company and, following such investigation, may fix just and reasonable rates.

There are three private utility services in the Province: Calgary Power Limited, Canadian Utilities Limited, and Northland Utilities Limited. A synopsis of these services is given below.

Calgary Power Limited.—This Company has eight hydro-generating plants on the Bow River and its tributaries, west of Calgary, namely: Horseshoe Falls, Kananaskis Falls, Ghost River, Cascade, Barrier, Spray, Rundle and Three Sisters. At Dec. 31, 1953, the Company's total plant capacity was 206,550 h.p. All the plants except Horseshoe Falls are operated by remote control from the Kananaskis Falls Plant.

The Company has four reservoirs on the Bow River and its tributaries: Lake Minnewanka, 180,000 acre-feet; Interlakes (Kananaskis Lakes), 90,000 acre-feet; Spray Lakes, 200,000 acre-feet; and Ghost, 74,000 acre-feet.

An agreement with the City of Medicine Hat provides an additional 33,500 h.p. to the Company from the city's steam plants. Power from these plants is fed into a transmission network which supplies the entire electrical requirements of the cities of Calgary, Red Deer and Wetaskiwin, about 290 towns, villages and hamlets, and a substantial industrial load in central and southern Alberta. This transmission network also ties in with the municipal utilities of Edmonton and Lethbridge, the Canadian Utilities Limited at Drumheller, Vegreville and Vermilion, and the East Kootenay Power Company in the Crowsnest Pass.

The Company has 3,810 miles of main transmission lines and 675 miles of distribution lines extending from Westlock in the north, Milk River and Waterton in the south, and from Chauvin, Macklin (Saskatchewan), Brooks and Bow Island in the east, to Nordegg, Banff and Crowsnest Pass in the west. The cities of Calgary and Red Deer, and the towns of Ponoka, Fort Macleod and Cardston are supplied on a wholesale basis. All other points on this system are supplied on a retail basis. At Dec. 31, 1953, about 1,800 oil wells were being supplied with electric-pumping service as were other users directly related to the oil industry, such as gathering stations, refineries and pipeline-pumping, and also industrial plants near Edmonton.

An extensive farm-electrification program is in progress in Alberta and at Mar. 31, 1954, the Company was serving approximately 19,202 farms over 13,000 miles of farmer-owned Rural Electrification Co-operative Association rural transmission lines. The program calls for the addition of from 3,000 to 4,000 farms each year for the next several years. Calgary Power undertakes the engineering, construction and operation of these co-operatives through a non-profit subsidiary (Farm Electric Services Limited), energy being supplied to the farm co-operative consumers at cost.

Canadian Utilities Limited.—Towns and villages northeast of Drumheller are supplied from a 19,000-kw. coal-fired steam plant in that city. Towns and villages north and east of Vegreville are served from a 9,000-kw. gas-fired steam plant located at Vermilion. Towns and villages north and west of Grande Prairie are served from a 3,195-kw. diesel-engine plant located in that centre. There are tie lines with the Calgary Power Limited system at Vermilion, Vegreville and Drumheller. The Company serves over 28,400 customers in approximately 235 towns, villages and hamlets, including 73 rural electrification associations in the Province, through a network of approximately 2,500 miles of transmission and distribution lines, in addition to 3,990 miles of Rural Association lines. Since 1949, rural electrification in the territory served has been extended to farmers on a co-operative basis whereby the farm or Rural Electrification Association system is constructed and operated at cost by the Company for the farmer. Over 4,200 farmers are now receiving electric power service.

Northland Utilities Limited.—This Company, with headquarters at Edmonton, supplies electric energy to 5,700 consumers in 26 communities. Diesel-generating plants are located at Jasper, Athabasca, High Prairie, McLennan, Peace River, Lac La Biche, Manning, Fairview and at Hay River, N.W.T. Low-voltage transmission lines extending from these generating stations supply electricity to 370 farms and 17 villages. The Company also operates a hydro plant at Jasper.

Northland Utilities Limited serves 1,300 consumers with natural gas at Dawson Creek, B.C., 362 consumers at Fairview and Bluesky, and 569 at Grande Prairie, Sexsmith, Spirit River and Rycroft.

British Columbia.—The British Columbia Power Commission was appointed Apr. 17, 1945, under the provisions of the Electric Power Act, "an Act to provide for improving the availability and supply of electric power". Operations were commenced in August 1945 with the acquisition of electrical properties in several parts of the Province. The following statement shows the growth in the number of customers to April 1953:—

Year Ended Mar. 31	*Services Acquired*	*Services Installed*	*Total Services for Period*	*Cumulative Services to End of Period*
	No.	No.	No.	No.
1946 (from August 1945)	13,270	832	14,102	14,102
1947	7,151	1,786	8,937	23,039
1948	1,000	3,431	4,431	27,470
1949	831	3,318	4,149	31,619
1950	4,686	3,321	8,007	39,626
1951	473	4,075	4,548	44,174
1952	103	2,600	2,703	45,912
Sold June 1951	−325	−640	−965	
1953	—	3,597	3,597	49,509
1954	—	3,264	3,264	52,773

Highlight of recent expansion was the addition of the fifth and sixth generating units at the Commission's largest plant, the John Hart Development on Campbell River, Vancouver Island. The expansion, completed in the autumn of 1953 at a cost of about $4,500,000, increased the capacity of the plant from 112,000 to 168,000 h.p. (i.e., 80,000 to 120,000 kw.). The John Hart Development has been almost continuously expanded since it was started in 1945. The first two units were placed in operation late in 1947, the third and fourth in the autumn of 1949.

The John Hart Development now serves, through Commission transmission and distribution systems, territory on Vancouver Island between Duncan and Campbell River, including the Comox Valley, Alberni, Lake Cowichan and Nanaimo-Duncan power districts. The B.C. Electric Railway Company Limited takes delivery of power at Nanaimo and transmits a large block for distribution in Victoria and environs, so that the John Hart Development serves the main areas of Vancouver Island. The facilities provided as a result of this development have led to the establishment of three major industries on Vancouver Island—sulphate pulp mills at Nanaimo and Port Alberni, and a newsprint mill near Campbell River.

Growth in the smaller communities of the Province served by the Commission in number of customers and in average consumption per customer has necessitated steady expansion of most of the 19 diesel generating stations.

Other hydro plants operated by the Commission are the Whatshan Development on Lower Arrow Lake, which was completed in the summer of 1951 with a capacity of 33,000 h.p. (22,500 kw.), and the Clowhom Falls Development with 4,000-h.p. capacity. The Whatshan plant serves much of the Arrow Lakes area, but its main market is the rich fruit and dairy district of the North Okanagan and the Kamloops area. The Clowhom Falls plant serves the Sechelt Peninsula, up-coast from Vancouver.

24.—Growth of the British Columbia Power Commission, Years Ended Mar. 31, 1951-54

Item	1951	1952	1953	1954
Customers No.	44,174	45,912	49,509	52,773
Installed plant capacity kw.	100,350	123,845	124,415	174,255
Circuit Miles of Line—				
Transmission (high voltage) miles	550	570	590^{r}	624
Distribution primaries “	2,393	2,541	2,704	2,995
Power Requirements—				
Generated kwh.	255,556,217	375,935,761	524,502,927	687,158,106
Purchased “	11,932,279	2,817,547	2,350,721	9,962,128
Totals, Power Requirements kwh.	**267,488,496**	**378,753,308**	**526,853,648**	**697,120,234**
Annual revenue $	4,064,641	4,895,230	5,902,344	7,103,853
Capital Investment—				
Generation plant $	18,384,774	24,748,127	26,488,225^{r}	33,678,194
Transmission plant $	5,760,593	8,206,878	10,292,920^{r}	11,686,982
Distribution and general plants $	9,945,223	12,359,770	14,201,418^{r}	15,957,640
Totals, Capital Investment $	**34,090,590**	**45,314,775**	**50,982,563**^{r}	**61,322,816**

Sources of power for the year ended Mar. 31, 1954, were as follows:—

Source of Power	*kwh.*	*p.c.*
Hydro-electric energy	634,100,242	91·0
Diesel-electric energy	51,611,544	7·4
Steam-electric energy	1,446,310	0·2
Purchased power	9,962,128	1·4
TOTALS	697,120,224	100·0

The Northwest Territories and Yukon Territory.—The Northwest Territories Power Commission was created by an Act of Parliament in 1948 to bring electric power to points in the Northwest Territories where a need developed and where power could be provided on a self-sustaining basis. By legislation, passed in 1949, the Act was extended to include Yukon Territory.

The Northwest Territories Power Commission has authority to construct and operate power plants as required in a territory having an area of over 1,500,000 sq. miles. The Commission is continually investigating power needs in this large area and studying reports on hydro-electric power sites.

The Commission has a hydro-electric power development in operation on the Snare River about 94 miles northwest of Yellowknife, N.W.T. Power has been supplied from this plant to the mines in the Yellowknife area since the autumn of 1948 and, in the summer of 1949, a transmission-line connection was completed to augment the supply of power to the town of Yellowknife.

A diesel generating station and distribution system was put into operation at Fort Smith, N.W.T., in October 1950. This project supplies the various government establishments at Fort Smith, e.g., the Departments of Northern Affairs and National Resources, Transport, National Defence (R.C.C.S.), Health and Welfare, and Public Works as well as to the Royal Canadian Mounted Police and private commercial consumers and residents of the settlement.

A hydro-electric development was completed on the Mayo River approximately six miles north of Mayo Landing, Y.T., in December 1952. This plant is delivering power to the mining developments in that area and to the settlement of Mayo Landing.

The total capital investment of the Commission as at Mar. 31, 1954, was approximately $8,861,660.

Section 3.—Total Development of Electric Power from All Available Sources

In Section 1 of this Chapter total water-power resources are given with the proportion that, so far, has been developed. Table **3** of that Section analyses the hydraulic turbine installation by the proportions in central electric stations, in pulp and paper mills, and in other industries. This is useful material, but it does not take into account electric power developed in central electric stations or in other industries from sources other than hydraulic.

Section 2 covers the central electric station industry including stations under the public ownership of provincial and municipal governments and those under private ownership. Neither of these Sections, however, gives a complete presentation of the total electric power developed in Canada. All the hydraulic energy developed is not converted to electric power: there are a number of water wheels and water turbines used for direct drive that are not geared to electric generators. On the other hand, certain central electric stations in the Atlantic Provinces, Ontario and the Prairie Provinces generate electricity from steam or internal combustion engines. It is the purpose of this Section to show the total electric power generated from all available sources. Most of the power comes, of course, from central electric stations, the figures having been given in Table 4 of Section 2, p. 554. The total kilowatt hours of electric power generated by central electric stations is divided into that generated from water power and that generated from thermal engines of all kinds.

As shown in Table **25**, total electric power generated by central electric stations in 1952 was 59,409,198,000 kwh. For a complete presentation, the power generated by manufacturing industries for their own use and the power generated by the primary mining industry for use in its own operations must be added. There are a few other sources of electric energy included, such as electric railways which produced 9,175,000 kwh. in 1952. This production has been taken into the annual total shown in Table **25**. There are numerous small lighting and power plants on farms, rural homes, summer resorts, stores, etc., where electricity from central electric stations is not available and for these no data are available.

25.—Total Power Generated by Central Electric Stations, Manufacturing and Mining Industries, 1943-52

Note.—Figures for the years 1927-42 will be found in the 1948-49 Year Book, p. 516.

Year	Central Electric Stations		Manufacturing Industries		Mining Industries		Total[1]
	'000 kwh.	p.c.	'000 kwh.	p.c.	'000 kwh.	p.c.	'000 kwh.
1943	40,479,593	92·1	3,211,610	7·3	248,848	0·6	43,951,190
1944	40,598,779	93·2	2,752,125	6·3	210,554	0·5	43,571,276
1945	40,130,054	93·9	2,362,260	5·5	201,765	0·5	42,720,374
1946	41,736,987	93·4	2,714,261	6·1	199,950	0·4	44,662,916
1947	43,424,799	92·1	3,467,535	7·4	269,412	0·6	47,174,384
1948	42,389,681	89·7	4,590,677	9·7	270,522	0·6	47,262,060
1949	44,418,573	87·8	5,898,390	11·7	263,835	0·5	50,592,990
1950	48,493,718	88·1	6,266,051	11·4	264,232	0·5	55,036,765
1951	54,851,844	89·3	6,369,094	10·4	212,832	0·3	61,446,787
1952	59,409,198	89·9	6,450,729	9·8	234,431	0·3	66,103,533

[1] Includes power generated by electric railways for their own use.

CHAPTER XIII.—THE FISHERIES

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The immense fishery resources of Canada are derived from the waters of the North Pacific and North Atlantic, and from numerous lakes and rivers of the inland provinces. Canada ranks high in fishery production and leads the world in monetary returns from the export of fishery products. (*See* Chapter XXII for fisheries exports.)

CANADA'S COMMERCIAL FISHERIES RESOURCES*

Canada has a coastline of nearly 18,000 miles. Counting the larger islands, some of which are centres for important fishing operations, the sea front totals something like 50,000 miles. The surface of Canada is drained by vast river systems which contain one-half the fresh water of the globe. The Great Lakes, Great Slave Lake and Great Bear Lake, virtually fresh-water oceans, are among the largest lakes in the world.

These Canadian coastal waters and the sprawling network of inland lakes and rivers teem with fish of many kinds. Best known perhaps are the cod and lobster of the Atlantic Coast, the whitefish and lake trout of the inland lakes and rivers, and the Pacific Coast salmon runs. However, there are also many other kinds.

On the Atlantic Coast fishermen take other groundfish such as haddock, pollock, hake, cusk, redfish,† halibut, plaice, yellowtail, witch, flounder and skate. Types of shellfish, in addition to lobster, are clams and quahaugs, oysters and scallops, mussels, winkles and crabs. Of the fish species of the Atlantic occurring in schools (pelagic fish) and those entering the river estuaries, herring is the most important. Immature herring are landed in southern New Brunswick from the Bay of Fundy and are marketed under the name of "sardines". Other pelagic fish are the roving mackerel, the smelt, Atlantic salmon, alewives, swordfish and tuna. In fact more than 30 different kinds of fish, shellfish and marine mammals such as seals and whales are commercially taken by Canada's Atlantic fishermen. In addition, marine products such as Irish moss and other sea-grasses are harvested.

In the fresh-water areas, the whitefish and lake trout commercial fisheries are supplemented by catches of pickerel, lake herring, pike, perch, sturgeon, tullibee and goldeye.

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* Prepared by the Director, Information and Educational Service, Department of Fisheries, Ottawa.

† Also known as rosefish and ocean perch.

Off the Pacific Coast, in addition to the valuable salmon catch, fishermen take great quantities of herring and halibut as well as soles, grey cod, lingcod, crabs and oysters.

During the past decade Canadians have developed a new appreciation of these vast fisheries resources available in the waters in and around Canada. More people are writing and reading and talking about fish and asking questions about how to buy and cook it. New interest is being shown in conservation measures designed to maintain a continuing yield of salmon, halibut, lobster and other heavily fished species, and the consumption of fish products has been going up, slowly but surely.

This increased attention being focussed on Canada's fisheries resources has developed mainly as a result of post-war changes in the world food-supply picture. The production of animal fats and proteins from sources other than the sea has not kept pace with increasing world populations. Nations that see no hope of increasing the production of protein food from their limited land areas have turned to the sea—the world's greatest storehouse of raw materials. Special agencies have been set up under the United Nations to help other countries develop the sea fisheries off their own shores. Canada, through the Colombo Plan, has contributed substantially towards the establishment of a fishing industry in Southeast Asia.

Other countries having limited sea fronts are sending their vessels thousands of miles across the ocean to share in the fishing grounds of the high seas. And Canadians have watched with concern as increasing numbers of these vessels fill their holds on the rich fishing grounds a few miles off Canadian shores. Their concern has been heightened by the belief expressed that the same pressure for food supplies from the sea may exist in Canada one hundred years from now. Alert to this possibility, both the commercial fishing industry and government agencies have initiated steps to develop the resources to the fullest extent. The industry has invested new capital in modern boats and gear. More fish are being caught and new products are being devised so that greater utilization of all species can be effected.

As a result of government activity there is now more fisheries legislation on the statute books than at any time in Canadian history. Of major importance in this respect are the bilateral and multilateral treaties worked out with other countries for the conservation and development of high seas fisheries off Canada's Atlantic and Pacific Coasts as well as those of the inland Great Lakes.

These are some of the factors that have given impetus to the ascendancy of fisheries in the national scene. Of course there are others—geographical and historical—which have long influenced the growth of Canada's fisheries.

It is climate that largely determines the life picture in water as in air. Fish are very much like land animals. They have their own preference in food and surroundings. They tend to congregate in the regions where their particular food is most plentiful and the climate is agreeable. Food is undoubtedly the most important factor and food is dependent on sunlight, dissolved chemicals and temperature for its growth and on the ocean currents for its location.

The sardines, herring and many other similar forms of fish feed entirely on plankton. Some salmon find sustenance on the shrimp forms, others are fish-eating and the cod are almost entirely flesh eaters. All of these are completely dependent on the first link in the chain of "sea-food"—the plankton—plenitude of which determines the number of fish that any part of the sea will support. The great fisheries are close to land, or in the shallow seas less than 600 feet deep, where the nutrient elements and the plankton are most plentiful. The areas of these shallow seas where marine life abounds are greatest on the continental shelves which rim the world's land masses. Characteristically, the countries north of the equator have wide sloping shelves and, therefore, 98 p.c. of all commercial fishing is in the northern hemisphere.

Sixty per cent of the world's annual production of fish, which is estimated at about 26,000,000 tons, is taken by six countries—China, Japan, Norway, the United Kingdom, the United States and Russia. Canada ranks next to these and contributes a million tons to the total each year. The wide sloping continental shelf on the Atlantic Coast with its submerged hills or "banks" is considered one of the most extensive and richest fishing grounds in the world. The United Kingdom, the United States and Norway as well as several other countries exploit these fishing grounds. Canada's historic rights in them, however, date back to her earliest colonial days.

The Atlantic Fisheries.—Approximately two-thirds of Canada's total catch comes from Atlantic waters. One-half of this catch is cod which still dominates the deepsea fisheries despite more than four centuries of exploitation. Although the old method of fishing with dories and long lines of baited hooks has largely given way to the modern otter trawler, a large part of the catch is still salted down in the holds of the vessels, to be processed for markets in the West Indies, South America and Europe. Of course many of the Canadian and United States vessels, being closer to home ports, now supply the filleting plants on the Atlantic shore with fresh fish. Haddock, hake, halibut, redfish and flatfish were at one time caught only incidentally by the codfishing fleets and the smaller species, such as redfish and flatfish, were thrown "over the side". Filleting operations resulted in the creation of markets for them and vessels now go to the Grand Banks especially for redfish, haddock or halibut, depending on the season.

Only in recent years has knowledge been gained of the extent of the exploitation of the fishing grounds of the Northwest Atlantic. After World War II, Canada, the United States and several other countries became concerned about the possibility of over-fishing the "banks". Subsequent international discussion led to the signing in 1949 of the International Northwest Atlantic Fisheries Treaty by Canada, the United States, the United Kingdom, France, Italy, Portugal, Norway, Denmark, Iceland and Spain, all of whom pursue the fisheries in the Northwest Atlantic. Under the treaty, the International Commission for the Northwest Atlantic Fisheries was formed to study the fisheries so that any signs of over-fishing or depletion of the stocks would be recognized should they occur. This treaty marked a milestone in the history of fisheries conservation in that it was the first time a group of nations formally committed themselves to a program of scientific investigation and regulation to the end that fish resources of a vast area of the high seas could be managed and utilized prudently. It was also the first time conservation action had been taken before a crisis had occurred.

Statistics gathered by the Commission have given the world some idea of the enormous yield of fish from Northwest Atlantic waters. The Convention area includes the waters off the west coast of Greenland, off Labrador, Newfoundland, Quebec, the Maritime Provinces and the New England States, to a line east of Flemish Cap. From these waters, in 1952, the ten nations participating in the convention took nearly 3,000,000,000 lb. of groundfish, of which slightly more than 2,000,000,000 lb. were cod. Haddock landings amounted to 313,000,000 lb.; redfish, 225,000,000 lb.; flounders 117,900,000 lb.; and halibut, 7,500,000 lb. Hake, cusk and pollock were also included in the catch.

Even more astonishing, as a result of experimental fishing carried out under the sponsorship of the Canadian Government, is the fact that new stocks of cod and redfish hitherto apparently unexploited are being discovered around the Coast of Newfoundland.

Canada's share in the groundfish catch now amounts to nearly 1,000,000,000 lb., of which Newfoundland takes a little more than half. The Island of Newfoundland lands 500,000,000 lb. of cod, the bulk of it being salted and dried for export. Markets for Canadian salted cod began to deteriorate as a result of competition from other countries in the 1930's. Trade restrictions and currency difficulties caused a further decline in exports to the West Indies and other countries following World War II. It is an important question now whether Newfoundlanders can make a proper living by producing dried fish from the wealth of fish near their shores. In recent years they have been trying to escape from dependence upon the dried fish trade by developing other and more lucrative markets for their fish, particularly those markets on the North American continent that demand fresh fish. Newfoundland has had substantial fisheries for herring, salmon, lobsters and clams and is trying to develop them in a diversification program. Being most advantageously situated for very great fisheries, Newfoundland may achieve new prominence with the evolution of more effective techniques for capturing the fish and for preparing them most suitably for whatever markets may be available.

Nova Scotia, being farthest out in the ocean, accounts for most of the remainder of the groundfish catch of cod, haddock, hake, halibut and redfish. However the lobster fishery in the inshore waters of the Maritime Provinces exceeds the value of the cod catch. All the Atlantic Provinces have good lobster fisheries but the largest production is in Nova Scotia. There are extensive grounds in the Northumberland Strait area, around the southwestern coast of Nova Scotia and in the Bay of Fundy. The lobster fishery is heavily pursued because of the high returns to the fishermen. Restrictions on gear and seasons and other protective measures have to be enforced to ensure that breeding stocks are maintained. Lobsters are caught with baited traps which are so efficient that there is evidence that almost the entire legal-sized population is removed each year by the fishermen. Illegal fishing and poaching have created an acute problem for authorities since there is danger that if the regulations are not observed economic depletion could result. The attractiveness of lobster fishing compared with cod fishing is illustrated by the fact that in 1953, the lobster fishermen of Quebec, New Brunswick, Nova Scotia and Prince Edward Island earned $14,500,000 for a catch of 42,000,000 lb. while the cod fishermen earned only $5,000,000 for a catch of 183,000,000 lb.

New Brunswick and Nova Scotia produce considerable quantities of clams and quahaugs. Prince Edward Island and New Brunswick are the chief producers of oysters and the scallop beds off the coast at Digby, N.S., are famous. Exploratory fishing and other measures taken to expand these fisheries have not been encouraging, although some new beds of scallops have been found.

Herring, one of the most important food fishes of the world, are plentiful. More than 240,000,000 lb. are caught annually in Atlantic waters. One-third of the catch forms the basis of the important sardine canning industry in southern New Brunswick. Exploratory fishing has led to the discovery of new and valuable stocks of herring in the Gulf of St. Lawrence and great possibilities are entertained for the future of the herring fishery as a food product when and if markets can be developed for them. The Fisheries Research Board of Canada, which conducts the biological research so essential to the full development of Canada's fisheries, has conducted an extensive program of exploratory fishing over several years, using various European-type fishing nets and trawls. In the southwestern portion of the Gulf of St. Lawrence in 1953 the Board used drift-nets and brought in catches of herring more than double the yield that a similar effort would produce in the North Sea.

Salmon, smelts and alewives are trapped as they enter the river mouths on their way to spawning beds, while mackerel and tuna are netted in open water. Swordfish, and sometimes tuna, are pursued with harpoons. Smelts are caught mainly in New Brunswick, a large share of the catch coming from the Miramichi River. The commercial Atlantic salmon fishery is limited only by the availability of supply. For some years the catch has shown a steady decline and a federal-provincial committee is now directing a research program designed to determine the causes of the decline and to rehabilitate the fishery.

Like the Atlantic salmon, the Maritime oyster fishery is limited only by the supply. Famed among epicures and always in great demand, the oyster is a slow-growing bivalve and the fishermen with their tongs can remove them from the beds much faster than they can be replaced by natural reproduction. The fisheries scientists have experimented with methods of oyster cultivation and considerable success has been achieved. The areas of sea bottoms suitable for oyster growth are limited, however, and progress in the expansion of this industry through oyster farming is slow and uncertain.

One of the most interesting developments resulting from experimental fishing techniques demonstrated by the Fisheries Research Board was the introduction of dragging operations for flatfish in the coastal waters of Nova Scotia. The flounders, witch and plaice had never been exploited by the fishermen until the Board showed how it could be done with small drag-nets. The fishery has flourished into an important industry in the larger Nova Scotia bays, creating a new source of income for the fishermen.

Whales and seals are numerous in Atlantic waters around Newfoundland and have been the basis of important industries in that Province. But markets for the oil have been declining since 1952, resulting in a decrease in activities. In 1951, 585 whales were taken by six whaling ships operating out of Hawkes Harbour, Labrador, and Williamsport in White Bay. In addition, 55 minke whales and 3,102 potheads (blackfish) were caught at Dildo in Trinity Bay. In the following year markets were so unattractive that the larger whaling factories did not operate and most of the catch consisted of potheads.

The Newfoundland seal fishery, which is steeped in tradition, centres around two species of seals, the harp or "saddleback" and the hood or "bladdernose". In the winter they migrate from their homes within the Arctic Circle south to the Grand Banks of Newfoundland. The size of the herd has been estimated at about 3,000,000 seals. In the spring when they start moving north again the sealing fleets from Norway, Denmark and Newfoundland make the kill. At one time, about 400 Newfoundland vessels carrying 13,000 sealers took part in the hunt. In 1953, only three Newfoundland vessels and two other vessels operated by Nova Scotia interests cleared from St. John's for the sealing grounds. The adult seals are taken for the oil, which is extracted from the blubber, and the pups are taken for their fur.

In 1951 when an exceedingly large catch of seals—about 440,000—was recorded by all vessels from both sides of the Atlantic, some concern was expressed for the maintenance of the herds. Informal discussions took place between Canada, Norway, Denmark and France on the need for information as to the size of the herds and their productivity. Since then, a standard opening date for sealing has been agreed upon each year and a research program has been conducted. Tagging operations and aerial surveys carried out by the Fisheries Research Board have produced a great deal of new information which should prove useful if any joint conservation measures are found necessary in the future.

The Pacific Fisheries.—The continental shelf off Canada's Pacific Coast is not as extensive as that of the Atlantic, reaching out only from three to 60 miles from land. The valuable salmon constitutes the main prop of the fishing industry and, in terms of dollars and cents, are more valuable than any other fish in Canada. There are five species of salmon, all in abundance, ranging the Pacific coastline and ascending the rivers through most months of the year. The five species belong to a single race, distinct from that of the Atlantic salmon and the true trouts but grouped within the same general family. The popular names for them are sockeye, pink, coho, chum and spring. They differ considerably in size, habits, time of their returns to fresh water and in commercial quality. The sockeye is the most famous because its flesh is very red, very rich in oil and holds both colour and flavour well under all conditions of storage. It is the fish on which the salmon-canning industry of the Pacific Coast was built and it is especially the fish of British Columbia and the great Fraser River. All Pacific salmon spawn in fresh water. The young migrate to sea and when they reach maturity they return to fresh water to spawn and, after spawning, die. The biggest catches are taken when they begin their spawning run and come into estuary waters on the flood tides. About 150,000,000 lb. are taken annually by British Columbia fishermen using purse-seines, gill-nets and trolls. A large portion of the catch is canned, production being as high as 2,000,000 cases (case = 48 1-lb. tins) in some years.

Obviously the salt-water life of the salmon is largely beyond human control and, therefore, present conservation efforts are directed mainly towards three objects—ensuring a sufficient escapement of salmon to produce the eggs necessary for future runs, improving spawning areas that have been adversely affected by industrial developments and natural disturbances, and protecting the young salmon between their emergence from the gravel and their arrival in salt water.

The salmon's predictable habits make them highly vulnerable and rigid controls are put on the fishing operation. There are regulations governing the sizes of nets and methods of using them. There are certain areas, usually near the mouths of rivers, that are closed to fishing at all times. The controls, based on exhaustive biological research, are effective and it may be said that the fishery is being well managed now on a sustained-yield basis. But the productivity of the salmon depends largely on conditions in streams and lakes, primarily water height and water flow. Fluctuations in stream level and in stream flow can be extensive with devastating losses likely to occur under extreme conditions. Stream improvement measures, particularly to control stream flow, hold great promise for increasing salmon productivity and are being continually investigated. Hydro-electric power dams and water-storage impoundments for irrigation and flood control present obstructions to the ascent of salmon to the spawning grounds of major river systems. But power dams are not the only impediments to access by up-stream migrating salmon to their spawning grounds. Natural falls, stretches of highly-turbulent and fast-running water also form obstacles, as do log jams in streams, produced by careless or thoughtless logging, or by natural windfalls. Remedies can be found for most of these and they are attended to by fisheries officials. The responsibility for maintaining the salmon and other anadromous fisheries of British Columbia lies with the Federal Government through its Department of Fisheries. (The term "anadromous" is used to describe fish, which, like salmon, ascend rivers from the sea, at certain seasons, for breeding.) Where power developments and other industrial enterprises have jeopardized the runs of salmon the problems have been co-operatively worked out to the satisfaction of all concerned and devices installed to protect the fish.

Scientific studies conducted by the Fisheries Research Board have revealed that with proper improvement and control of salmon streams, production can be increased. The prospects for successful development to increase production in certain streams are good and are being given careful attention. To what extent logging operations and general deforestation have contributed and are still contributing to the deterioration of salmon waters and to what degree present reforestation practices are improving the conditions has yet to be determined.

The migrations of the salmon lead them across international boundaries within territorial waters, with the result that Canadian fishermen compete with United States fleets for a share of the catch, particularly for the sockeye runs of the Fraser River. These runs, because of their international nature, are supervised by the International Pacific Salmon Fisheries Commission, a two-nation body responsible for regulating the fishery to assure the perpetuation of the species. Early work on the Fraser River sockeye by the Commission led to the removal of a major obstacle to free migrations at Hell's Gate, thus eliminating a serious complication in rehabilitating upper river runs.

The important halibut fisheries of British Columbia are also in international waters and bring Canadian fishermen in competition with the fishing fleets of the United States. This fishery also is regulated by an international body called the International Pacific Halibut Commission. It was established a quarter of a century ago when the stocks of halibut had declined as a result of intensive fishing.

The work of the Commission has been so accompanied by success that a new set of problems has been raised. The fishery has become so popular as a result of increased stocks of fish that quotas are taken up rapidly, leaving halibut longliners idle for several months of the year. Canada's share of the halibut catch annually amounts to between 20,000,000 lb. and 27,000,000 lb., taken within a few weeks and marketed throughout the year from cold storages.

The British Columbia herring fishery ranks next to salmon in monetary importance. These small fish appear in vast schools near the coast at certain times of the year and are caught in prodigious quantities. The year's landings run anywhere from 350,000,000 lb. to 400,000,000 lb., the bulk being processed at reduction plants as herring meal and oil. At one time, herring were dry-salted and marketed in the Orient but World War II eliminated this form of processing and unsettled conditions in China after the War prevented rapid rehabilitation of the dry-salt herring trade. However, because the price for herring oil has been uncertain, at times, the dry-salt herring production has recently been renewed on a limited scale.

In addition to these "big three" of the Pacific Coast fisheries, there are other operations of importance. Landings of sole and flounders, mostly taken by trawl-net in northern Hecate Strait, have been on the increase and total annually about 18,000,000 lb., destined for fresh fillet trade. Ling and black cod are worth mentioning, and clams, crabs and oysters also provide a small source of income to fishermen. A whaling fleet operating off the West Coast takes as many as 400 whales each season.

The oyster industry in British Columbia involves two species, the native variety called the Olympia oyster and the Japanese or Pacific oyster, a fast-growing variety which has been avidly cultivated and, commercially, has largely supplanted the native species. Expansion of the Pacific oyster industry is encouraged by research workers who devise and demonstrate efficient "farming" techniques, investigate new areas of production and new methods of planting the seed. The native Olympia oyster has not been developed to any extent largely because it occupies relatively high beach territory more subject to frost and drought.

Along British Columbia's irregular coastline, abundantly supplied with fjords and inlets, there are undoubtedly many valuable untapped fishery resources. The salmon, halibut and herring fisheries, which are highly efficient, and to a lesser extent certain of the minor fisheries such as crab, shrimp and smelt have had prior interest and attention because of their availability and abundance close to large centres of population. It seems hardly likely that much more can be done in adding new salmon or herring fishing grounds to those already known unless it be in an off-shore and deep-sea direction.

For other fisheries, however, further expansion is thought possible. For groundfish supplies, there are many areas of the inshore sea bottom yet unexplored where rich harvests may be made. For crabs, shrimps, oysters, clams, mussels and abalone and seaweed, only a small portion of the coastline has been assessed regarding the supplies available.

The off-shore areas present opportunities for an increase in British Columbia's marine fisheries. But such developments require utilization of larger and more stalwart vessels, installation of modern aids of navigation and a certain degree of exploratory prospecting either by government or industry to determine the potentialities of the areas in relation to existing market demands.

The need for development of the high seas fisheries of the Pacific Ocean and a method of unified control for the purposes of wise management has been recognized by Canada, the United States and Japan—the three countries mainly concerned—in the North Pacific Fisheries Convention signed at Tokyo in 1952. It brings Japan into association with Canada and the United States in co-operative measures to preserve and perpetuate the fish stocks of the North Pacific. The treaty recognizes the concept of the freedom of the high seas but it attempts to get recognition of the fact that where a fishery has been developed and is under conservation by one or more parties jointly, other nations which have not contributed to its development might be asked to abstain from fishing these resources as long as they continue to be fully utilized and under scientific study and regulations. It will be one of the responsibilities of the International North Pacific Fisheries Commission, set up under the treaty, to make scientific studies of the resources of the North Pacific and to see whether species, which one or more of the countries abstain from fishing, continue to meet the conditions of abstention. The Commission, like that of its counterpart on the Atlantic, has no regulatory powers but can make recommendations to the governments of the three member countries. It is unique in scope and objectives in that under the terms of the treaty it must undertake work involving new procedures and principles for which it has no precedents: for instance, the principle of abstention from fishing for certain species now fully utilized by one or more of the three countries, provided that conservation is practised and governmental regulations are enforced. Under this principle Canada and Japan will not fish for salmon in the eastern Bering Sea and Japan will not fish for salmon, halibut and herring which originate on the Canadian-United States side of the North Pacific.

Some international fisheries have not been referred to international commissions because the problems are less acute and the values of the fisheries smaller. Effective informal arrangements for investigation have, however, been made such as for the elusive pilchard which at one time appeared in great numbers off the British Columbia coast.

The Fresh-Water Fisheries.—The fresh-water fisheries of Canada in terms of volume are small compared with the operations on the coasts. They are little known to the public and the world at large, except perhaps in the sport-fishing sense. It is a fact, nevertheless, that Canada has the greatest fresh-water commercial fisheries in the world. The St. Lawrence waterway system with its chain-like series of inland seas and the Prairie Provinces' network of lakes and streams form a great cornucopia, overflowing with whitefish, yellow pickerel, blue pickerel, tullibee, trout, pike, saugers, eels and other varieties. Though there are fluctuations in the catch from year to year, the total yield has risen steadily in volume and now averages around 100,000,000 lb.—about one-sixth the size of the British Columbia catch. Two-thirds of the total comes from Ontario and Manitoba, each province producing annually between 30,000,000 lb. and 35,000,000 lb. of fish. Saskatchewan and Alberta rank next in production, followed by Great Slave Lake in the Northwest Territories, Quebec and New Brunswick.

In Ontario the fisheries are centred in two regions—the Great Lakes which are fished almost exclusively in the summer, and northwestern Ontario which is mainly a winter fishing operation and resembles those of the Prairie Provinces. On the Great Lakes, fish are taken inshore and on off-shore banks similar in nature to those of the Atlantic "banks". In a shallow lake like Erie the commercial varieties may be caught out in the middle of the lake. But in the deeper lakes the fish are mainly in the inshore areas. The inshore fishery is done largely with pound nets, hoop nets, seines and hooks and the fishermen use gasoline launches, skiffs and rowboats. The off-shore fishery is largely a gill-netting operation performed by a fleet of unique vessels called tugs which are designed to set and haul gill nets by mechanical means.

The Great Lakes fish populations, particularly the lake trout, have declined in recent years. Fishermen blame the parasitic sea lamprey, an eel-like creature which feeds on the blood and body juices of fish. The lamprey attaches itself to its victim by means of its sucker-like mouth and rasps a hole in the body with its sharp teeth. Because the fishermen of both Canada and the United States share in the Great Lakes fishery, an international agreement, providing for joint action in these waters in fishery research and in the elimination of the predator sea lamprey was signed at Washington in September 1954. In Canada, a Great Lakes Fisheries Research Committee was formed in 1953 by the Federal Government and the Ontario Provincial Government to co-ordinate and expand fishery research in Canadian waters and it is this agency which will provide the working nucleus of

Canada's share in this new program. The Committee is giving equal emphasis to general fisheries research and lamprey control. In the general program, research is being conducted into stocks of whitefish and lake trout and the possible utilization of the less popular species that enter the nets of the commercial fishermen. Hydrographic surveys are an important aspect of this work. In the lamprey control program, devices are being installed at the mouths of rivers frequented by lampreys at spawning time. The installations are electrified weirs which paralyse the lamprey and prevent it from reaching suitable spawning areas.

Manitoba's commercial fishing industry is based on a rich heritage of lakes and streams. Lake Winnipeg, the seventh largest fresh-water lake in North America, provides almost one-half of the Province's total catch. From this lake comes the Selkirk whitefish which is in great demand in the United States. The famous Winnipeg goldeye also first made its appearance from Lake Winnipeg catches. Of the three-score fish-producing lakes, most important are Lake Manitoba, Lake Winnipegosis, Lake St. Martin, Lake Dauphin, South Indian Lake, Gods Lake, Island Lake and the Manitoba portion of Reindeer Lake. In Alberta and Saskatchewan where the number of full-time fishermen in past years has been few, the commercial fishing industry is growing steadily. The total catch in Saskatchewan is now around 10,500,000 lb. and in Alberta about 10,000,000 lb.

Lake Athabasca, straddling the Alberta-Saskatchewan border, yields about 500,000 lb. of whitefish, lake trout and other fish each year to the Chipewyan and Cree Indians. Since 1926 its commercial output has totalled 20,000,000 lb. of fish. Lac La Ronge in Saskatchewan has been fished since 1922 and its current commercial production is nearly 1,000,000 lb. a year. Reindeer Lake, located across the Saskatchewan-Manitoba border, is another rich provider and in one year when fishing was intense, fishermen hauled out 2,500,000 lb. It is not known what the lake could stand on a sustained basis but its record over the past 14 years shows that its catch of whitefish and lake trout represents 10 p.c. of the entire production of the Province. Lesser Slave Lake in Alberta has yielded up to 5,000,000 lb. of fish a year while other northern lakes such as Wollaston, Big Peter Pond and Ile à la Crosse each produce annually about 500,000 lb.

The gill net is the chief fishing gear used in the Prairie Provinces. In the summer operation, fishermen operate motor-driven boats and skiffs. In the winter the nets are set through holes cut in the ice and the fishermen establish camps on the ice right at the fishing grounds; usually staying out a week at a time under semi-Eskimo conditions. Living accommodation is a caboose which is hauled to the camp-site.

Quebec's fresh-water commercial fisheries are based on the streams and rivers which flow into the St. Lawrence River, although some of the northern waters are also fished. In addition to the fresh-water species found in other provinces, Quebec fishermen catch a number of salt-water fish which frequent the rivers at certain periods. Eels and sturgeon rank as the most valuable of Quebec's inland fisheries. Most of the catch of eels is caught around the Isle of Orleans, near Quebec, and in the Richelieu River at Iberville. About 500,000 lb. are taken annually and shipped frozen in boxes or in trucks equipped with special fresh-water tanks to brisk markets in the United States. Shipments are also made to European countries. In New Brunswick, the fresh-water fishing industry is a small enterprise compared to the tidal fisheries and the total production of alewives, shad, eels, salmon and suckers amounts to 500,000 lb. annually.

The Northern Fisheries.—Perhaps the greatest opportunity for expansion of the fresh-water fisheries lies in Canada's northern areas. The Yukon and Northwest Territories contain two of the earth's largest lakes and two mighty rivers, besides literally thousands of lesser waters, many of which have not been explored. On the northern edge of the Continent is the Arctic Coast which extends roughly 10,000 miles from the Bering Sea to Hudson Strait.

In the northland lakes and rivers, a few species, like the inconnu, the Arctic grayling or "bluefish" and the Arctic char, have not been found anywhere else in Canada. Others like whitefish, trout, salmon, pike and pickerel are familiar to most Canadians. The sports fish have gained fame among the anglers for their huge size and fighting characteristics. The food fish have achieved similar recognition from the commercial operators for their abundance and table qualities. As the line of civilization pushes northward, it is expected that greater use will be made of these resources. The business of exporting fish is now well established in the northern areas of the three Prairie Provinces and at Great Slave Lake. Great Slave is one of the greatest single producers of whitefish and lake trout and has yielded more than 40,000,000 lb. of fish since commercial fishing began in 1945. In view of the importance of the fish of this and other lakes as a food supply to the native Indians, the Federal Government permits commercial fishing in the Northwest Territories only when it is evident that the commercial "take" will not affect the continuity of supply of fish to the natives. Landings of whitefish and lake trout from Great Slave are thus limited to an annual quota of 9,000,000 lb.

The scattered communities of Indians, Eskimos and white residents in the north have long depended on fish for food both for themselves and their sled dogs. Along the Arctic Coast, the Eskimos depend on the beluga, the seal and various kinds of fish for practically all their daily requirements. The beluga, commonly called a "white whale" is actually a mammal of the dolphin or porpoise family. A successful summer whaling season means prosperity for all Eskimos in the community.

Moreover, the migrations of beluga to the mouth of the Churchill River from Hudson Bay give Manitoba the distinction of being an inland province with a whale fishery. Operating under a permit granted by the Minister of Fisheries and with a quota set each season by the federal authorities, an establishment at Churchill renders the animals into oil and meal. Local Indians are employed to hunt the belugas.

The Eskimos make great use of the seals found in the Arctic waters, the oil making good dog food, the meat providing substantial dinner fare and the skin making waterproof boots and parkas. Large amounts of Arctic char, herring, whitefish and inconnu are eaten and an Eskimo who starts the winter with less than eight to ten thousand fish can look to lean days ahead.

The Fisheries Research Board is attempting to find out more about the fisheries resources along the Arctic Coast and around the Islands of the District of Franklin. The Board operates a specially constructed research boat, the *Calanus*, which has been making regular trips to Eastern Arctic waters each summer since 1949. These studies are now being extended to Hudson Bay and the Beaufort Sea. In Ungava Bay, the Board has found that both the Atlantic cod and the Greenland shark provide possibilities of exploitation by the Eskimo populations there and the federal authorities have tried to educate the inhabitants to take greater advantage of the supply.

The Yukon Territory has its share of the better-known food and game fish but, while they are important as a local food supply and as a tourist attraction, they are not significant enough to support a commercial enterprise for export purposes. In the Yukon, king salmon are caught by the white residents who use an ingenious device known as a fish-wheel, unique in Canada's commercial fisheries. The Indians use gill nets set in eddies and the majority of the fish are filleted, smoked and dried for winter use. Both fish-wheels and nets bring in small quantities of other fish such as the whitefish, inconnu and Arctic grayling.

In the southwest Yukon, the Alsek River and its tributaries contain rainbow trout, actually a landlocked steelhead, and a few land-locked sockeye salmon. The larger Yukon lakes produce whitefish, lake trout and "least herring" or cisco. For the sportsmen, there are "bluefish", Dolly Varden trout, rainbow trout and pike.

Great Bear Lake and Great Slave Lake are linked by the mighty Mackenzie River which drains a quarter of Canada and is comparable in size to the St. Lawrence. This river system and the thousands of lakes in the Territories constitute a great food reservoir for the local residents. Fishing is a staple summer industry of the Indians and of all those white residents who have to travel by dog-team during the winter. In the Mackenzie Valley the sled dogs alone consume each year several million pounds of fish—whitefish, herring and inconnu—and most of it comes from the Mackenzie River in the summer and autumn when the Indians gather around the trading posts where fishing is good. Great Bear Lake provides fish for the Indians in sufficient quantity but it holds little prospect for commercial fishing because the fish populations form merely a fringe inhabiting the near-shore zone and could not survive a large-scale operation.

The commercial development of the fisheries for export purposes in the Northwest Territories has special possibilities. The lower Mackenzie River could be commercially fished, particularly from the Sans Sault rapids north to the delta but such a venture is not yet practicable because the catch would have to be shipped a thousand miles by refrigerator barges to Great Slave during a very short navigable season.

The area is a fisherman's paradise, of course, but access is difficult and only Great Slave Lake has been developed to any extent for the accommodation of sports fishermen.

The first half of the twentieth century with its two world wars and great depression brought fluctuations of fortune to the fisheries industry but it has been, on the whole, an era of increasing development and prosperity in this field. The increased use of trawlers, the development of quick-freezing and filleting equipment and cold-storage facilities have all helped to make the industry much more diversified than formerly. Modern methods of packaging and canning have been adapted to fishery products. Certain varieties of fish such as British Columbia salmon, Atlantic lobster, halibut and whitefish command premium prices on the world market so that, although not the greatest fish exporting nation (Norway exports larger quantities), Canada's exports lead the world in terms of dollar value. The marketed value of the nation's fisheries topped the $200,000,000 mark in 1951, three-quarters of the amount being obtained from outside markets. This is not a high figure when compared with the production of some other Canadian industries but for the people of the coastal provinces and the northern territories it is a dominating factor in their economic life.

Canada, by wise management policies and by full utilization of all available resources, is in a position to play an increasingly important part in producing fish to meet the food needs of the world's populations.

Section 1.—Governments and the Fisheries

Subsection 1.—The Federal Government*

The British North America Act gave the Federal Government full legislative responsibility for the regulation of the coastal and the inland fisheries of Canada. Under the Act, laws are made for the protection, conservation and development of the fisheries throughout the country. The provinces, however, have property rights in the non-tidal fisheries and have been delegated certain administrative responsibilities in varying degree. Consequently, though all the regulations governing fishing are made by the Federal Government, the work of administering the fisheries (enforcing the different laws and regulations, inspecting fish products, issuing licences, etc.) is done in some cases by federal officers and in others by provincial officers, according to arrangements made with the different provinces and without duplication of staff.

Specifically, all tidal or sea fisheries, except those of Quebec, are administered by the Federal Department of Fisheries while the fresh-water or non-tidal fisheries, with some exceptions, are administered by the provincial departments. The exceptions are the Yukon and Northwest Territories, Nova Scotia, New Brunswick and Prince Edward Island where the fresh-water fisheries are federally administered.

The work required in the conservation, development and general regulation of the nation's coastal and fresh-water fisheries is performed by three agencies under the Minister of Fisheries:—

(1) The Department of Fisheries proper, with headquarters at Ottawa and area offices under Chief Supervisors at Vancouver, Winnipeg, Halifax and St. John's.
(2) The Fisheries Research Board of Canada, with headquarters at Ottawa and seven stations across Canada.
(3) The Fisheries Prices Support Board, with headquarters at Ottawa.

The Department of Fisheries.—The chief responsibilities of the Department of Fisheries throughout Canada are, in brief, to conserve and develop Canada's primary fishery resources; to encourage the development of the fishing industry in the national economy; to inspect fish products, establish standards of quality and promote the optimum utilization of the resource; and to develop a proper public understanding of the resource and the industry.

The larger part of the Department's staff is stationed in the field, working in the four above-mentioned spheres, and is comprised mainly of a protection staff and an inspection staff. The protection officers, including those on the Department's 74 patrol and protection vessels, are concerned with the enforcement of the conservation regulations under the Fisheries Act and other Acts designed to ensure a continuing maximum yield of fish. The inspection officers are responsible for the inspection of fish products and processing plants under the Fish Inspection Act and relevant sections of the Meat and Canned Foods Act.

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* Revised in the Department of Fisheries, Ottawa.

The conservation program of the Department is carried out by the Conservation and Development Service. Protection officers not only enforce regulations pertaining to restricted areas, close seasons, limitations in location and types of gear, but they inspect spawning streams and keep them clear of obstructions. Engineers of this Service construct fishways to enable fish to by-pass dams. Hatcheries are maintained to restock waters where the fisheries are under federal administration.

To ensure a high standard of quality, inspection of fish and fish products is carried out by the Inspection and Consumer Service. Fish inspection laboratories are maintained on the Atlantic and the Pacific Coasts. The Service also has a staff of home economists at Ottawa who operate a test kitchen and carry out demonstrations and lectures on methods of preparing and cooking fish and fish products.

Through the mediums of printed material, films, radio and exhibitions, the Information and Educational Service informs the public on the various aspects of the industry and the work of the fisheries service with the object of developing a better understanding of the resource and those engaged in its exploitation. The Service works closely with the Conservation and Development Service in matters concerning conservation of fisheries, and with the Inspection and Consumer Service toward encouraging increased consumption of Canadian fish products in both North American and export markets.

The Markets and Economics Service, which has a staff of economists and market analysts, is responsible for bringing together a fund of factual information, through surveys and other means, on the primary fisheries and on the processing, transportation and distribution of fishery products. Such facts and their interpretation form the basis for development and for other programs of the Department. In the marketing field continual study and interpretation is carried out on market trends in the foreign and the domestic fields. In co-operation with the Department of Trade and Commerce and its Trade Commissioner Service, work is being done on the development and extension of export markets for Canadian fish.

In addition to providing these regular services, the Department assists the commercial fishing industry in several special ways. For the purpose of promoting efficient primary fishing operations and improving the marketing of fishery products, assistance is provided for the construction of draggers and long-liners and for bait-freezing and storage facilities on the Atlantic Coast. For each new trawler built in Canada, the owner is eligible for a licence to operate a used trawler imported from either the United Kingdom or the United States and registered in Canada after payment of duty. An applicant wanting only one trawler may import a used one from the United Kingdom without having to lay down a new keel in Canada. This policy applies to ships purchased from any country entitled to most-favoured-nation treatment in accordance with Canada's obligations as a signatory of the General Agreement on Tariffs and Trade.

In 1953 an additional service to fishermen was provided through the establishment by the Government of the Fishermen's Indemnity Fund which affords low-cost protection from losses of boats and lobster traps through storms and other causes. The Fund, which is administered as a regular service within the Department, meets a long-standing need on the part of the small-scale individual fishermen. Vessels valued at from $250 to $7,500 may be insured with payment of a premium of 1 p.c. of the appraised value. By Mar. 31, 1954, a total of 1,515 fishing vessels with an appraised value of $2,109,637 were covered under the Fund.

The lobster trap protection plan provides that, generally speaking, any lobster fisherman having 32 or more traps may obtain protection up to approximately 50 p.c. of the value of his traps for premiums ranging from five cents to 25 cents per trap depending on the length of the season and on the value of the traps. Although the plan did not come into effect in some areas until the spring of 1954, 234 fishermen with 44,927 traps were insured as at Mar. 31, 1954.

A study is being made of the possibility of extending the program to include other types of fishing equipment that are subject to periodic loss or damage and for which no commercial insurance is available.

The Department also provides assistance in the education of fishermen by making payments to educational institutions that have agreed to carry out educational work among them.

The Fisheries Research Board.—The functions of the Fisheries Research Board of Canada, which was established in 1937, cover a wide field in the interests of conservation, development and management of the fishery resources of the country. In 1953 the membership of the Board was increased from 15 to 19 to allow for wider regional representation and a permanent chairman was appointed.

The work of the Board is, generally, biological and technological in character and is carried out at seven stations: the Biological Station at St. Andrews, N.B., with its substation at Ellerslie, P.E.I.; the Pacific Biological Station, Nanaimo, B.C.; the Central Fisheries Research Station, Winnipeg, Man.; the Newfoundland Fisheries Research Station, St. John's, N'f'ld.; the Atlantic Fisheries Experimental Station, Halifax, N.S.; the Pacific Fisheries Experimental Station, Vancouver, B.C.; and the Gaspe Fisheries Experimental Station at Grande Rivière, Que.

Scientific investigations are an important part of the development of the commercial fishing industry and provide the basis for conservation measures put into effect by the Department. Almost all the principal stocks of commercial fish are under observation by the Board's biologists. Many species, such as Pacific salmon, Atlantic salmon, Atlantic groundfish, lobster, herring, albacore, whitefish, whales, oysters and clams, are being studied intensively. The studies provide knowledge of the life history, growth rate, reproduction, distribution, enemies, diseases, etc., of the fishes, shellfish and sea mammals. Special investigations are undertaken as problems arise. The Board has completed a survey of the fisheries resources of the Northwest Territories and is exploring the fisheries resources of Canada's Eastern Arctic.

Fundamentally, the objective of the Board's technological investigations is to eliminate waste through the utilization of all fishery products that come out of the waters and the putting of those products to the best possible use in the light of current knowledge. The Board's knowledge is continually expanding through basic and applied research and this is helping to bring about a wider distribution of fishery products, a higher level of quality in the products marketed, a better understanding of the use of fish in general nutrition and of fish by-products for food, medicinal and industrial purposes.

The Fisheries Prices Support Board.—Under the Fisheries Prices Support Act, passed in 1944, this Board was set up in July 1947 to recommend to the Government price-support measures when severe price declines occur. The Board functions under the direction of the Minister of Fisheries and consists of a chairman, who is a senior officer of the Department of Fisheries, and five members chosen from private and co-operative firms in the industry, representative of the various fish-producing regions of Canada.

The Board has authority to buy quality fishery products under prescribed conditions and to dispose of them by sale or otherwise, or to pay to producers the difference between a price prescribed by the Board and the average price the product actually commands. The Board has no power to control prices nor has it any jurisdiction over operations in the fishing industry or the fish trade.

Money necessary for dealings in fishery products is available to the Board from the Consolidated Revenue Fund to a maximum aggregate amount of $25,000,000 but only on recommendation of the Federal Treasury Board and authorization of the Governor in Council.

The Board maintains a small staff for administrative and research activities. The work is closely integrated with that of the Department's Markets and Economics Service and, where possible, services required by the Board are carried out by Department personnel. The Board has carried out field surveys on market conditions and possibilities, and on factors affecting the income of fishermen in the various producing areas. It keeps the financial position of fishermen under continuous review and makes recommendations to the Government on the basis of the facts as it finds them. Special investigations are made when serious problems arise in particular areas.

International Fisheries Conservation.—Fisheries regulation is sometimes needed on the high seas in international waters and international treaties have had to be made. Canada's obligations under such treaties with the United States and other countries are administered by the Department of Fisheries.

Canada and the United States have led the world for years in joint fisheries conservation development. Major examples of this joint effort are the International Fisheries Commission, concerned with the preservation of the halibut stocks of the North Pacific and the Bering Sea, and the International Pacific Salmon Fisheries Commission, concerned with the conservation and development of the sockeye salmon of the Fraser River. Investigations carried out under the Commission's auspices, subsequent regulation and limitation of catches and, in the case of salmon, the construction of fishways appear to have been successful in arresting and reversing an earlier trend towards depletion of these fisheries. Another example of restoring a depleted marine resource by international agreement and action is that of the fur seals of the Pribilof Islands in the Bering Sea. Under the Provisional Fur Seal Agreement, Canada receives 20 p.c. of the fur-seal skins taken annually by the United States Government from the Pribilofs. Only surplus animals are killed.

In 1949, the Government of Canada became a signatory, along with nine other countries, to the International Northwest Atlantic Fisheries Convention which came into force in 1950. The work of the Commission, established under this Convention, concerns the scientific investigations of the fishery resources of the northwest Atlantic. The Commission has no regulatory powers but can make recommendations to the respective governments regarding measures that may be necessary for maintaining the stocks of fish that support the international fisheries in the Convention area. Treaty signatories are: Canada, Denmark, Iceland, the United States, the United Kingdom, France, Italy, Norway, Portugal and Spain. Headquarters of the Commission is at Halifax, N.S.

A step towards international action in regulating the high seas fisheries of the northern Pacific Ocean was achieved in December 1951, when Canada, the United States and Japan conferred at Tokyo and reached an agreement on fisheries problems. The resulting convention was ratified by the three contracting governments and instruments of ratification were deposited at Tokyo in June 1953. The treaty is known as the International Convention for the High Seas Fisheries of the North Pacific Ocean and aims at providing the maximum sustained yield of the fishery resources of the northern Pacific non-territorial waters with each of the parties assuming obligations to encourage conservation measures. The Commission established under this Convention will study the northern Pacific fisheries, determine the application of the treaty principles and will promote and co-ordinate the scientific studies necessary for ascertaining conservation programs. Temporary headquarters of the Commission is at Vancouver, B.C.

Canada is a member of the International Whaling Commission and is obligated to collect biological data on whales caught by Canadian vessels. Whaling operations are conducted off the Newfoundland and British Columbia coasts.

Subsection 2.—The Provincial Governments*

An outline of the work undertaken by each of the provincial governments in connection with administration of commercial and game fisheries is given in the following paragraphs.

Newfoundland.—The union of Newfoundland with Canada on Mar. 31, 1949, brought about a transfer of some responsibilities in fisheries administration. The Newfoundland Fisheries Board remained the agency of government in the supervision of salt-codfish marketing, but fish and plant inspection, operation of bait depots, etc., became the concern of the Federal Department of Fisheries. The Board, formerly responsible to the Government of Newfoundland through the Commissioner for Natural Resources, became responsible to the Minister of Fisheries for Canada.

The Provincial Government is concerned mainly with improvement and development in fishing and production methods and has conducted experiments in long-lining and deep-water trawling, in the construction of multi-purpose fishing craft and in the exploration of potential fishing grounds. Steps are being taken to secure more efficient use of fisheries salt. Loans have been made available to processors for the establishment or development of fishing fleets and processing plants, and to fishermen for the construction and purchase of modern vessels capable of a greater variety of fishing operations and larger production.

In 1951, the Governments of Canada and Newfoundland established the Newfoundland Fisheries Development Committee, consisting of representatives of fishermen, processors and exporters, and of both Governments. The objective of this Committee is to establish the role of each sector of the industry and each government, jointly or severally, in the organization and development of the fisheries. Action has been taken by both Governments in certain matters considered as necessary preliminaries to an over-all program, such as an economic and sociological survey of fishing settlements and the encouragement of the use of community rather than individual stages and rooms by shore fishermen.

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* Prepared by the respective provincial departments responsible for fisheries administration.

The inland waters of Newfoundland, which provide excellent sport fishing, are not commercially exploited to any significant degree. The lakes and ponds remain under the authority of the Natural Resources Branch of the Provincial Department of Mines and Resources, but the rivers and streams—the resort of migratory fish such as salmon and sea trout—passed under federal jurisdiction as a consequence of the union. Matters of conservation and guardianship are, therefore, mainly or wholly the concern of the Federal Department of Fisheries, although to the extent to which they affect the ponds and lakes, they are subject to provincial or joint action.

Prince Edward Island.—The major responsibility for aid to the fisheries of this Province is undertaken by the Federal Government. Prince Edward Island, however, has established a Department of Industry and Natural Resources which administers the commercial and game fisheries.

Consultations were held in 1950 when marine architects and fishing ports were visited along the Atlantic seaboard with a view to obtaining the best information on boats and gear most adaptable to the Province's coastal waters. These studies resulted in the adoption of the 60-ft. Island Dragger. During the search for information on boats, much was learned of the possibility of adapting the drag-net principle to smaller boats and experiments were conducted to ascertain power requirements and general feasibility. The major part of the revenue of the commercial fishermen of the Province is provided by lobster, smelt and oyster catches.

The streams of the Province are mostly spring-fed and fairly constant in flow, thus providing excellent spawning grounds and nurseries for game fish, of which speckled trout are by far the most important. The problem is to increase the production of trout of a size attractive to anglers and comprehensive biological investigations are being carried on by the Fisheries Research Board to attain this objective by determining the most efficient procedure in stocking, managing and cropping. The Province provides the sites for these investigations and the Conservation and Development Branch of the Federal Department of Fisheries builds the necessary dams and supplies the fish required for experimental purposes.

Nova Scotia.—The basic responsibility for the administration of tidal and inland fisheries in Nova Scotia is undertaken by the Federal Government. The Province, however, supplements the activities of this authority through its Department of Trade and Industry. In practice, a system of co-operative effort has been worked out between the two authorities with each free to carry out individual responsibilities and specific programs. Provincial activities fall into three sections—development, administration and research.

Development.—Development activities include engineering services, financial assistance to the fisheries industry generally, and educational services to the fishermen.

Engineering services are related to the design, construction and equipment of boats, vessels and fish-processing plants. A marine engineer is employed for these services and for the extension of consultant services to all persons interested in the industry. Financial assistance is extended, by way of loans, for the construction and modernization of fish-processing plants and to fishermen for the acquisition of boats and engines. Where the requirements of large new plants have exceeded the capacity of local authorities, the Province has provided such utilities as water lines and rail sidings; the Province also operates a bait freezer at Cheticamp.

Educational services extended to fishermen comprise instruction in basic navigation, rules of the road, and care and maintenance of marine engines by means of short courses at selected outports and a permanent school maintained at Lunenburg. This educational program is assisted by grants under the Canadian vocational training program of the Federal Department of Labour.

Administration.—The Nova Scotia Fisheries Act serves to supplement federal jurisdiction and is administered jointly by the Department of Trade and Industry and the Federal Department of Fisheries. The Act requires fish-processing plants and fish buyers to obtain annual licences, which are issued by the Department of Trade and Industry only on the recommendation of inspectors of the Federal Department of Fisheries and the certification of the Department of National Health and Welfare as to compliance with standards of construction, operation and sanitation contained in federal regulations.

Information obtained from the licensing activities and other statistics supplied by the Federal Department of Fisheries enables the Provincial Department of Trade and Industry to handle inquiries in respect of the fisheries industry.

Research.—Provincial fisheries research activities have been confined largely to the inland trout and salmon fisheries. The Department of Trade and Industry has carried out a five-year program of water control on the LaHave River in the interests of salmon preservation and development; has undertaken experiments in fertilization of lakes and in partial poisoning of lakes to reduce the numbers of coarse fish in competition with trout for the available food supply; and has conducted some special studies of trout populations and salmon migrations. Research activities of this nature have been continued under the direction of the Nova Scotia Research Foundation.

New Brunswick.—The commercial fisheries of New Brunswick are under the jurisdiction of the Federal Department of Fisheries. Since 1945, a Fisheries Division has been in operation under the provincial Department of Industry and Development. In 1946, a Fishermen's Loan Board was established to provide financial assistance to bona fide fishermen for the purchase of new boats and engines. Since its formation the Board has lent over $2,016,747 of which $992,108 has been repaid. It has modernized the deep-sea fishing fleet by the introduction of a most effective small dragger, 51 units of which are operating in the area of the Gulf of St. Lawrence and three in the Bay of Fundy. Seven additional modern units are under construction. The Fisheries Division is promoting experiments on flounder dragging as well as on the seining of herring in the Gulf of St. Lawrence area.

Quebec.—The Minister of Game and Fisheries administers both the sea and the inland fisheries of Quebec. The Department is composed of two divisions—the Division of Maritime Fisheries and the Division of Fish and Game, the latter being charged with the administration of the inland fisheries.

Sea Fisheries.—Quebec is the only province administering its own sea fisheries. For the benefit of producers and fishermen, it provides a system of cold-storage plants for the freezing and preservation of fish. Since the erection of the first plant in 1932, the network has grown to 50 plants with a daily freezing capacity of 250 tons of fish and a storage capacity of 16,000,000 lb. These cold-storage plants also perform a valuable service to fishermen by providing them with frozen bait. In addition, the Department owns and maintains 115 snow houses where fish may be chilled before being sent to storage or filleting plants, 40 culling sheds, and three artificial drying plants where 6,000,000 lb. of fish may be processed annually.

The Department maintains a staff of inspectors, fish wardens, technicians and technologists to administer fishery legislation and to assist in the application of new techniques for the expansion of the industry. The central administration is located at Quebec City, with an office at Gaspe for the administration of cold-storage plants. Statistics are compiled by the Department of Trade and Commerce in co-operation with the inspectors of the Maritime Fisheries Division.

Fish inspection is carried out under federal and provincial legislation by provincial inspectors, who are vested with additional powers for export purposes by the Federal Government.

Educational work among the fishermen and producers is also conducted by the Department in order to teach the latest methods of fish preparation and obtain high-quality products. The new Fisheries Training School at Grande Rivière gives to fishermen of all ages the opportunity of taking free theoretical and practical courses in fishery, and the Superior School of Fisheries at Ste. Anne-de-la-Pocatière trains technologists in a four-year course. Encouragement is given to the co-operative associations of fishermen through the Social Economic Service of the latter institution. Under a maritime credit system, fishermen are able to obtain loans from credit unions for the purchase of boats and gear. The Department adheres to the federal-provincial agreement on the building of draggers and long-liners and assumes the building costs on a five-year capital refunding plan.

The fish trade is being promoted by advertising campaigns in newspapers and magazines, cooking demonstrations, educational films and free distribution of fish recipes and publicity leaflets, as well as by exhibits at fairs.

Hydrographical research in the Gulf of St. Lawrence, studies on the location of new fishing grounds as well as experiments on sea-fish biology are conducted by a Marine Biological Station at Grande Rivière and two substations on the North Shore and Magdalen Islands. This research has brought into use new types of modern fishing vessels recommended to fishermen. The Department also operates a Limnological Laboratory at Quebec City for studying the biology of the fresh-water fish of the St. Lawrence River and tributaries.

Inland Fisheries.—The Division of Fish and Game exercises jurisdiction over the inland waters. Three hundred full-time wardens are employed and licences are required for sport-fishing and hunting, the revenue from which is applied to the improvement of fishing and hunting conditions. Five hatcheries are maintained at strategic points throughout the Province: St. Faustin, Lachine, Baldwin's Mills, Tadoussac and Gaspe. These establishments distribute speckled trout, Atlantic salmon and grey trout fry, fingerlings and older fish.

The Department administers five parks or reserves in all of which, except for Mount Orford Park, excellent fishing may be found. The Gaspesian and Laurentides Parks are renowned for their trout fishing. The Chibougamau Reserve and the La Vérendrye Park, situated on the height of land, are eminently suited to canoe trips in search of pickerel, pike and grey or speckled trout. Four salmon streams, all under the jurisdiction of the Fish and Game Division, are open to anglers: the Romaine River, the St. Jean River, the Petite Cascapédia River and the Matane River. The Department co-operates with sportsmen through a joint committee composed of departmental officials and the directors of the larger fish and game associations. The committee studies the maintenance of satisfactory fishing and hunting conditions and other problems arising out of the ever-changing conditions of modern life and their effect on the wildlife of the Province.

The Biological Bureau of the Province, located at the University of Montreal, and the big piscicultural laboratory at Quebec City, with its two stations for practical work located in the Mont Tremblant and Laurentides Parks, study problems connected with marine life.

Ontario.—The fishery resources of Ontario are administered by the Division of Fish and Wildlife, Department of Lands and Forests. The Division operates under the authority of the Fisheries Act (Canada), the Special Fishery Regulations for the Province of Ontario, the Ontario Game and Fisheries Act and the Regulations connected therewith.

Commercial Fishing.—The commercial fishing industry in Ontario provides employment for about 4,000 persons directly and for many more indirectly, and produces an annual harvest of from 30,000,000 lb. to 37,000,000 lb. of fish. The industry, although widely scattered throughout the Province, is centred chiefly on the Great Lakes, particularly Lake Erie which is noted for its whitefish, herring and blue pickerel. Lake Superior continues to be the leading producer of lake trout. Other principal species of fish taken commercially are: yellow pickerel, herring or ciscoes, sturgeon, pike, catfish (including bullheads), carp and suckers. Many of the smaller inland lakes are commercially fished, especially those in the northwestern portion of the Province, and careful management of these lakes is essential to ensure continued production.

The types of fishing boats in use vary from small craft to 60-ft. tugs, and types of gear also vary from the most common gill net, pound and trap nets, seines and baited hooks to small hand-operated seines and dip nets. Fishing methods and equipment have been rapidly modernized during the past few years. Diesel-driven steel-hull tugs have replaced steam-driven wooden tugs. Such aids as depth-sounding devices, radar, ship-to-shore and ship-to-ship communications have been developed and a better knowledge of the fish and their movements has been established from biological research findings. Modern icing facilities and transportation methods are in use, as well as new types of fishing gear. Nylon gill nets are replacing cotton and linen nets and a very efficient and economical trap-net is gradually replacing the pound-net in Lake Erie and other waters.

Excellent co-operation and understanding of the complex problems involved in the administration and management of Ontario's fresh-water fishing industry by the Government and the fishermen, through their local associations and the Ontario Council of Commercial Fisheries, is working to the advantage of the industry as a whole.

Angling.—In Ontario, with its estimated water area of 64,441 sq. miles, angling constitutes one of the most widely distributed recreations. There are 144 different kinds of fish in the Province, including such species as lake and speckled trout, yellow pickerel, black bass, pike and maskinonge. Though it is difficult to measure the value of sport fishing to the Province, the annual revenue from the sale of angling licences (mainly to non-residents as residents require a licence for Provincial Parks only) is in the neighbourhood of $2,000,000.

In order to maintain Ontario's reputation for excellent game-fishing, the wise management of this renewable resource is a prime factor, and a well-trained field staff of conservation officers and biologists is located in the 22 forestry districts of the Province.

Provincial Hatcheries.—Ontario operates 28 hatcheries and rearing stations. Excellent results have been produced in the culture and distribution of the various species of both commercial and game fish. Hundreds of millions of fry and fingerlings, comprising whitefish, herring, pickerel, trout (lake, speckled, brown and Kamloops), maskinonge, bass and ouananiche are distributed annually. Two of the finest trout-rearing stations on this continent are located in Ontario at Dorion near Port Arthur and at Hill Lake near Englehart.

Fisheries Research.—Research in Ontario is carried on in the Great Lakes where commercial fisheries problems are being investigated, and in inland waters where game-fish populations are being studied. The Manitoulin Island station conducts studies relating to the removal and utilization of the less valuable species and the effects of this removal on stocks of the more valuable commercial and game species. In Algonquin Park, a careful record of angling quality is kept in a number of test lakes to allow evaluation of management techniques. Certain of the more barren lakes are being treated with inorganic fertilizer and its effect on the microscopic organisms and fish is recorded.

The habits of lake trout and eastern brook or speckled trout are being studied in order to provide additional information on the proper management of these species. The increase in the sea lamprey and the drastic drop in production of lake trout in recent years in Lake Huron (including Georgian Bay and North Channel) are believed by many authorities to be directly related and have led to considerable joint research by the Ontario Government and by Federal and State Governments in the United States. Co-operation is maintained in the exchange of biological findings and, where practicable and feasible, the results are applied in an attempt to control this menace.

Established fish-management principles are applied by biologists in the various forestry districts. Their program includes such projects as biological surveys and investigations, bass harvesting, coarse fish removal, sea lamprey control, creel census studies, fish tagging and other related subjects.

Manitoba.—The fisheries of Manitoba are administered by the Provincial Department of Mines and Natural Resources. Supervision of the various commercial operations are carried out by officers using patrol boats in summer and bombardier snowmobiles in winter; in addition trucks and cars are used for routine patrols throughout the year. Departmental officers, working in co-operation with federal authorities, give special attention to the quality of the fish, a program that has been found to be beneficial to the industry as a whole.

During 1953, production from commercial fishing amounted to 16,036,300 lb. from summer operations and 15,301,800 lb. from winter operations, a total of 31,338,100 lb. Estimated value as marketed was $5,960,000. Pickerel, whitefish and saugers were the most important species caught.

The filleting trade each year assumes more importance and plants are being expanded and improved. High-quality fillets in attractive packages are becoming "best sellers" in the retail trade. Winnipeg is the principal domestic market but approximately 90 p.c. of the catch is exported to the United States.

The fish cultural program in Manitoba for 1952-53 included the operation of five fish hatcheries, two egg collecting camps, a temporary trout hatchery and a trout rearing station. Four of the five hatcheries are situated on the commercially fished lakes, and one, a sport fish hatchery, in the Whiteshell Forest Reserve.

During the year, 170,010,000 pickerel fry and eyed eggs, 73,450,000 whitefish eggs and fry, 2,091,158 trout fingerlings, and 43,786 adult perch and northern pike were distributed in the fishing waters of the Province.

Biological survey parties conducted investigations regarding speckled trout in northern Manitoba, lake and stream surveys in the Porcupine and Duck Mountains, the fishes of South Indian Lake and the sauger-pickerel relationship in the southern part of Lake Winnipeg. The fish in one small lake were poisoned with derrisroot powder and rainbow trout were introduced.

Saskatchewan.—The administration of fisheries in the Province of Saskatchewan comes under the Fisheries Branch of the Provincial Department of Natural Resources with head office at Prince Albert. Most of the fisheries resources are concentrated in the northern half of the Province, where the lakes have always been a source of food to the fur traders, trappers, prospectors and the Cree and Chipewyan Indians who inhabit the area, and also provide food and supplementary income to the settlers and homesteaders on the agricultural fringe.

There are approximately 129 commercially fished lakes in the Province and the principal species of fish include lake trout, whitefish, pickerel, northern pike, sturgeon, cisco, Arctic grayling, goldeye, mullet, perch and burbot. The growth of the filleting industry has been of particular significance, 15 filleting plants having been established since 1945. That the fishery resources are important to mink ranchers in the Province is shown by the fact that in the year ended Mar. 31, 1953, 68 fur-farm fishing licences were issued and 20,280 mink were fed under these licences; 702 domestic licences and 1,502 free licences to Indians were also issued.

There has been marked development recently in sport fishing. For the fiscal year 1952-53 there were 50,113 resident and 6,615 non-resident angling licences sold, compared with 6,000 resident and 1,500 non-resident licences sold in 1945.

The main endeavour in the fish cultural activities in the Province during the past few years has been to extend the range of the Arctic grayling species from the Far North into the Churchill River area, and to introduce eastern brook trout and certain warm-water species into areas where preliminary study seems to indicate suitable environment. To a large extent the indiscriminate planting of fish has been discontinued. A fish hatchery is operated at Fort Qu'Appelle for the hatching of pickerel, rainbow, brown and lake trout, and two experimental ponds have been built to facilitate the study, under controlled conditions, of the introduction of warm-water species from the United States. An experimental hatchery has been established at Lac la Ronge, where Arctic grayling and lake trout eggs have been hatched. An Arctic grayling spawn camp has also been established in the Fond-du-lac River, near Black Lake and a pickerel spawn camp is located on the Montreal River, near Lac la Ronge.

The management of the provincial water areas is conducted on a scientific basis. In 1947, a large-scale biological program was undertaken and more than 100 water areas have since been studied. The main emphasis has been on the study of productivity of the various water areas as well as the inter-relationship of the species and life histories. In so far as known facts will permit, the management of the various lakes has been placed on a sustained-yield basis. Experiments are in progress on the introduction of non-native species into suitable water areas. Where sport-fishing pressure has increased, such as on Lac la Ronge, Last Mountain Lake and Qu'Appelle Lakes, a creel census has been established and the annual harvest is recorded. The Fisheries Laboratory, established in 1949 at the University of Saskatchewan, has three permanent biologists on its staff; usually about 12 students of the University are employed each summer on biological surveys.

The Fisheries Branch has conducted a program of education designed to acquaint people of the Province with the importance of scientific research and the necessity of certain regulations governing the administration of fisheries. Three colour and sound films have recently been made on sport fishing.

Alberta.—Commercial and game fishing are administered by the Fisheries Branch of the Department of Lands and Forests.

Regulations under the Alberta Fishery Act, designed to improve the packing, handling, processing, storage and quality of commercial fish, have been well received and supported by the Alberta industry. In line with a policy for producing good-quality fish, lakes in which whitefish are infected with pike tapeworm and that do not meet the quality standard have been closed to commercial fishing.

Biological surveys of many lakes and streams taken over the last ten years have provided an opportunity to observe the result of former management policies. It was found that the classical tenets of trout-stream management, including close seasons, legal minimum, feeder stream closure and hatchery plants, were inadequate or incorrect. A new management plan is being conducted featuring the 'fallowing' of smaller tributary streams, abolition of the legal size minimum, except in the case of lake trout, a continuous open season on large streams and rivers and the removal of close seasons for pike, pickerel and perch. Trout-rearing stations and a provincial trout hatchery support trout-stream populations whenever required in cases of natural disaster, severe winter kill, introduction of new species or areas that have no spawning grounds.

British Columbia.—The Provincial Department of Fisheries was organized in 1901-02 and soon became very active in fish-cultural work, building and operating fish hatcheries and instituting scientific research into various fishery problems.

Broadly speaking, the administrative and regulative jurisdiction over the fisheries in British Columbia rests with the federal authority. When British Columbia entered Confederation in 1871, the Government of Canada undertook to protect, conserve and promote the fisheries of the Province, and one of the important functions of the Provincial Department of Fisheries is to observe these aspects and to keep the Provincial Government informed through the appropriate Minister.

The ownership of the fisheries in the non-tidal waters is vested in the Crown, in the right of the Province, as are the shell-fisheries, such as oyster-fishing and clam-fishing in the tidal waters. The authority to administer and regulate these fisheries is vested in the Province, although the regulations covering them are made under federal Order in Council on the advice and recommendation of the Province.

The provincial Fisheries Act provides for the taxation of the fisheries and, under civil and property rights, for the regulation and control of the various fish-processing plants under a system of licensing. Provision is also made for the settlement by arbitration of disputes regarding fish prices that may arise between the fishermen and operators of the various licensed plants. The administration of the Act involves the collection of revenue and the supervision of plant operations.

Net-fishing in the non-tidal waters of the Province, including commercial fishing, is regulated and administered by the Provincial Department of Fisheries, while authority for regulation of the game fisheries in the non-tidal waters is vested in the Game Commission, a branch of the Provincial Government administration. The Game Commission operates a number of trout hatcheries and egg-taking stations for re-stocking purposes.

The harvesting of marine plants of commercial importance in British Columbia, including the kelps, has recently been placed under the Provincial Department of Fisheries for regulation and control. Some research has already been done on a few of the more important species and more will be undertaken as required.

The Provincial Department of Fisheries has established a marine laboratory at Ladysmith on Vancouver Island for the purpose of conducting biological research into those species over which the Province has control, principally oysters, clams and other forms of shell-fish as well as marine plants. This research is conducted with the object of encouraging the industry to produce better products more economically and of enabling the Department to regulate the various species so that maximum exploitation may be obtained on a sustained-yield basis. The Department co-operates closely with the research work done by the Fisheries Research Board of Canada, particularly on the Pacific Coast.

Section 2.—Fishery Statistics*

Subsection 1.—Primary Production

The total marketed value of all fishery products in Canada (exclusive of Newfoundland) was $149,821,000 in 1952, representing a decline of almost 15 p.c. from the record peak of $175,718,000 in 1951. The landings of fish also dropped by about 10 p.c., from 1,448,000,000 lb. to 1,315,000,000 lb. The lower production of the West Coast fisheries accounted for these declines.

The data for Newfoundland are not included in the following tables because comparable statistics are not available. In 1952, the landings of fish in Newfoundland were estimated at 575,000,000 lb., with a value to the fishermen of about $13,000,000; the total value of all fishery products was approximately $27,500,000.

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* Revised in the Fisheries Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

1.—Marketed Values of All Products of the Fisheries, 1870-1952

(Exclusive of Newfoundland)

Year	Value	Year	Value	Year	Value
	$'000		$'000		$'000
1870	6,577	1915	35,861	1944	89,440
1875	10,350	1920	49,241	1945	113,871
1880	14,500	1925	47,942	1946	121,125
1885	17,723	1930	47,804	1947	123,900
1890	17,715	1935	34,428	1948	139,749
1895	20,199	1940	45,119	1949	131,138
1900	21,558	1941	62,259	1950	151,982
1905	29,480	1942	75,117	1951	175,718
1910	29,965	1943	85,595	1952	149,821

Three provinces accounted for 81 p.c. of the total marketed value of fisheries products in 1952; British Columbia's share was 39 p.c., a substantial decrease from the previous year, followed by Nova Scotia with 28 p.c. and New Brunswick with 14 p.c.

2.—Marketed Value of All Products of the Fisheries, by Province, 1948-52

NOTE.—Figures for the years 1917-47 are given in the corresponding table of previous Year Books beginning with the 1922-23 edition.

Province or Territory	1948		1949		1950		1951		1952	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Newfoundland	...	...	..	..	..	..	..	..	..	..
Prince Edward Island	3,634	3	2,705	2	3,321	2	3,213	2	3,759	3
Nova Scotia	36,091	26	35,040	27	38,165	25	40,296	23	42,435	28
New Brunswick	20,122	14	17,428	13	18,053	12	21,155	12	20,504	14
Quebec	5,943	4	5,112	4	5,563	4	5,511	3	6,113	4
Ontario	6,394	5	6,184	5	7,034	5	7,925	4	8,344	6
Manitoba	5,415	4	4,800	4	6,600	4	7,524	4	5,960	4
Saskatchewan	1,282	1	1,026	1	1,360	1	1,749	1	1,440	1
Alberta	636	--	562	--	768	--	862	--	943	--
British Columbia	58,704	42	56,120	42	68,821	45	85,221	50	58,098	39
Yukon	—	—	—	—	—	—	—	—	—	—
Northwest Territories	1,528	1	2,161	2	2,297	2	2,262	1	2,225	1
Totals	**139,749**	**100**	**131,138**	**100**	**151,982**	**100**	**175,718**	**100**	**149,821**	**100**
Totals, Sea Fish	123,991	89	115,921	88	133,445	88	154,829	88	130,367	87
Totals, Inland Fish	15,758	11	15,217	12	18,537	12	20,889	12	19,454	13

3.—Quantity of Sea and Inland Fish Landed, by Province, 1948-52

NOTE.—Figures for the years 1918-47 are given in previous editions of the Year Book beginning with the 1947 edition.

Province or Territory	1948	1949	1950	1951	1952
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Newfoundland	...	..	..	..	..
Prince Edward Island	30,682	27,525	29,225	27,187	32,661
Nova Scotia	376,609	364,332	378,484	381,800	396,623
New Brunswick	225,317	189,235	239,671	227,003	254,599
Quebec	101,414	106,114	117,459	101,999	127,563
Ontario	29,101	34,060	32,754	30,971	38,044
Manitoba	31,529	29,503	31,468	35,458	31,338
Saskatchewan	8,076	7,473	8,731	11,513	10,612
Alberta	7,224	6,302	7,067	8,399	9,657
British Columbia	613,903	546,312	638,497	616,492	406,452
Yukon Territory	—	—	—	—	—
Northwest Territories	7,805	9,101	7,866	7,478	7,042
Totals	**1,431,660**	**1,319,957**	**1,491,222**	**1,448,300**	**1,314,591**
Totals, Sea Fish	1,344,132	1,229,749	1,399,262	1,349,941	1,211,662
Totals, Inland Fish	87,528	90,208	91,960	98,359	102,929

In 1952, salmon was still the most valuable of all the leading species of fish, even though both the quantity landed and the marketed value were lower than in the previous year. Lobsters, cod and herring followed in that order. The most notable decline occurred in the quantity and value of herring.

Table 4 shows the quantities of the main species of the commercial fisheries landed (primary products only) and values marketed (primary and secondary products). Minor items, and secondary products not specifically derived from one particular kind of fish, are grouped in the item "Other".

4.—Quantities Landed and Values of All Marketed Products of the Chief Commercial Fisheries, 1948-52

(Exclusive of Newfoundland)

NOTE.—The quantity landed excludes the weight of livers, but the value of liver products is included in the value for the species concerned.

Item	1948	1949	1950	1951	1952	Increase or Decrease 1952 compared with 1951
Salmon (sea) '000 lb.	147,678	149,744	186,944	199,396	148,659	−50,737
$'000	37,929	37,278	49,929	61,723	41,568	−20,155
Lobsters '000 lb.	35,647	38,205	44,685	45,573	44,131	−1,442
$'000	13,958	14,105	16,260	17,569	18,633	+1,064
Cod '000 lb.	257,793	249,291	255,729	232,439	243,150	+10,711
$'000	18,802	17,004	17,242	17,463	18,108	+645
Herring (sea) '000 lb.	552,387	470,370	561,606	510,312	374,088	−136,224
$'000	15,868	14,798	14,706	16,315	10,035	−6,280
Whitefish '000 lb.	19,909	22,509	24,776	26,506	27,894	+1,388
$'000	4,989	5,690	7,057	7,640	7,295	−345
Halibut '000 lb.	21,019	22,214	29,288	27,969	27,499	−470
$'000	5,397	5,690	8,442	8,131	7,156	−975
Haddock '000 lb.	56,789	46,580	47,319	55,989	54,905	−1,084
$'000	4,536	3,769	4,246	5,144	5,204	+60
Sardines '000 lb.	92,535	62,097	68,092	64,804	54,542	−10,262
$'000	7,248	4,438	4,981	5,662	4,584	−1,078
Pickerel (doré) '000 lb.	15,980	13,535	13,877	17,074	16,599	−475
$'000	3,742	2,850	3,638	4,778	4,143	−635
Plaice '000 lb.	4,269	3,784	9,938	25,201	34,326	+9,125
$'000	253	225	834	1,944	2,522	+578
Lake trout '000 lb.	5,492	6,149	5,657	6,490	6,587	+97
$'000	1,644	1,806	1,682	1,908	2,070	+162
Mackerel '000 lb.	25,876	33,523	27,120	24,742	21,991	−2,751
$'000	2,252	2,518	2,192	2,112	1,889	−223
Clams '000 lb.	16,554	25,826	27,964	21,318	21,515	+197
$'000	961	1,386	1,660	1,317	1,851	+534
Pollock '000 lb.	24,033	18,583	28,984	17,831	28,398	+10,567
$'000	1,648	1,284	1,363	1,250	1,771	+521
Tuna '000 lb.	2,956	3,190	2,907	664	823	+179
$'000	1,224	879	859	1,777	1,667	−110
Hake '000 lb.	30,636	26,578	24,789	22,312	28,386	+6,074
$'000	1,644	1,522	1,260	1,181	1,584	+403
Soles '000 lb.	12,854	6,964	10,471	10,129	14,412	+4,283
$'000	1,171	580	914	1,188	1,533	+345
Alewives '000 lb.	17,255	17,002	20,917	29,056	41,056	+12,000
$'000	679	693	712	998	1,321	+323
Blue pickerel '000 lb.	5,868	9,831	8,665	4,102	7,447	+3,345
$'000	991	998	1,559	919	1,181	+262
Swordfish '000 lb.	2,363	2,237	2,156	2,544	3,157	+613
$'000	1,047	805	821	1,114	1,076	−38
Oysters bbl.	74,144	77,810	78,801	58,006	69,636	+11,630
$'000	859	876	830	804	1,019	+215
Smelts '000 lb.	7,988	6,876	7,154	6,523	4,815	−1,708
$'000	1,599	1,212	1,317	1,347	1,086	−261
Saugers '000 lb.	4,810	7,658	5,464	4,958	4,657	−301
$'000	732	1,032	1,196	1,168	822	−346

4.—Quantities Landed and Values of All Marketed Products of the Chief Commercial Fisheries, 1948-52—concluded

Item		1948	1949	1950	1951	1952	Increase or Decrease 1952 compared with 1951
Perch	'000 lb.	3,390	3,406	3,430	4,468	4,164	−304
	$'000	467	473	619	1,060	781	−279
Scallops	'000 lb.	871	437	769	571	1,113	+542
	$'000	501	217	424	332	727	+395
Pike	'000 lb.	6,780	6,673	6,122	7,239	6,636	−603
	$'000	717	541	688	822	602	−220
Ling cod	'000 lb.	6,586	7,263	4,638	4,746	4,242	−504
	$'000	879	871	523	826	542	−284
Rosefish	'000 lb.	1,319	2,046	2,070	4,054	7,999	+3,945
	$'000	83	142	130	310	502	+192
Other	$'000	8,006	7,456	5,898	8,916	8,549	−367
Total Values	**$'000**	**139,826**	**131,138**	**151,982**	**175,718**	**149,821**	**−25,897**

The value of the equipment used in primary operations of the commercial fisheries in 1952 increased to $102,943,000 from $92,427,000 in 1951. Of the total investment in the agencies of primary production, 86 p.c. was employed by the sea fisheries.

5.—Capital Investment in Sea and Inland Fisheries, 1951 and 1952

(Exclusive of Newfoundland)

Kind of Equipment	1951		1952	
	No.	$'000	No.	$'000
Sea Fisheries—				
Trawlers	9	1,775	19	4,077
Draggers	169	5,402	229	5,875
Vessels—gasoline, diesel and sail	2,153	24,978	2,121	27,638
Boats—gasoline, diesel, sail and row	26,506	20,514	25,926	23,024
Packers, carrying boats and scows	1,798	2,632	1,323	3,077
Herring nets	43,864	1,160	43,079	1,174
Mackerel nets	27,432	836	25,861	790
Salmon nets, traps and seines	15,026	5,416	13,686	5,019
Smelt nets	13,642	554	14,652	585
Other nets, weirs and seines	7,559	3,572	6,622	3,702
Tubs of trawl, skates of gear, hand lines	83,417	1,648	69,663	1,375
Lobster traps and pounds	1,962,353	7,346	1,977,761	7,836
Other gear	...	170	...	616
Premises—piers, wharves, freezers, ice-houses, small fish- and smoke-houses	7,860	3,551	7,734	3,886
Total Values, Sea Fisheries Equipment	...	**79,554**	...	**88,674**
Inland Fisheries—				
Fish carriers and tugs	193	1,868	188	528
Boats (gasoline and diesel), skiffs, canoes	7,551	2,563	7,942	4,360
Gill nets	...	5,171	...	5,271
Other nets, weirs and seines	6,769	1,238	6,884	1,036
Other gear	...	586	...	905
Premises — piers, wharves, freezers, ice-houses, small fish- and smoke-houses	1,898	1,447	2,618	2,169
Total Values, Inland Fisheries Equipment	...	**12,873**	...	**14,269**
Grand Totals	...	**92,427**	...	**102,943**

6.—Persons Employed in the Primary Fishing Industry, 1950-52

(Exclusive of Newfoundland)

Persons Employed in—	Sea Fisheries			Inland Fisheries		
	1950	1951	1952	1950	1951	1952
	No.	No.	No.	No.	No.	No.
Steam trawlers and vessels	112	218	460	—	—	—
Draggers	722	903	918	—	—	—
Vessels	8,769	8,857	8,394	—	—	—
Boats	35,427	34,337	33,344	10,974	10,764	10,465
Packers, carrying boats and scows	617	822	797	128	139	126
Fishing, not in boats	3,000	2,603	1,953	7,303	6,545	7,803
Totals, Employed	**48,647**	**47,740**	**45,866**	**18,405**	**17,448**	**18,394**

Subsection 2.—The Fish-Processing Industry

In 1952, a total of 635 firms were engaged in the fish-processing industry in Canada (including Newfoundland). The marketed value of their products was $134,725,000, about 17 p.c. lower than in 1951; this decrease was mainly accounted for by a drop in the value of British Columbia fisheries.

7.—Summary Statistics of Fish-Processing Establishments, 1948-52

Item		1948	1949	1950	1951	1952
Establishments—						
Newfoundland	No.	..	..	..	38	40
Prince Edward Island	"	65	62	57	55	54
Nova Scotia	"	203	212	208	203	198
New Brunswick	"	162	153	170	178	176
Quebec	"	107	104	94	96	89
British Columbia	"	63	68	68	69	78
Totals, Establishments	No.	600	599	597	639	635
Employees—						
Male	No.	10,329	10,417	10,176	12,346	11,606
Female	"	6,168	5,670	5,748	6,360	5,945
Totals, Employees	"	16,497	16,087	15,924	18,706	17,551
Salaries and wages	$'000	17,041	16,970	18,622	24,744	24,426
Fuel and electricity used	"	1,782	1,731	1,729	2,724	2,533
Materials used	"	74,588	69,090	74,446	101,621	86,458
Value of Products	"	115,821	111,919	128,968	163,010	134,725

CHAPTER XIV.—FURS

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—The Fur Industry

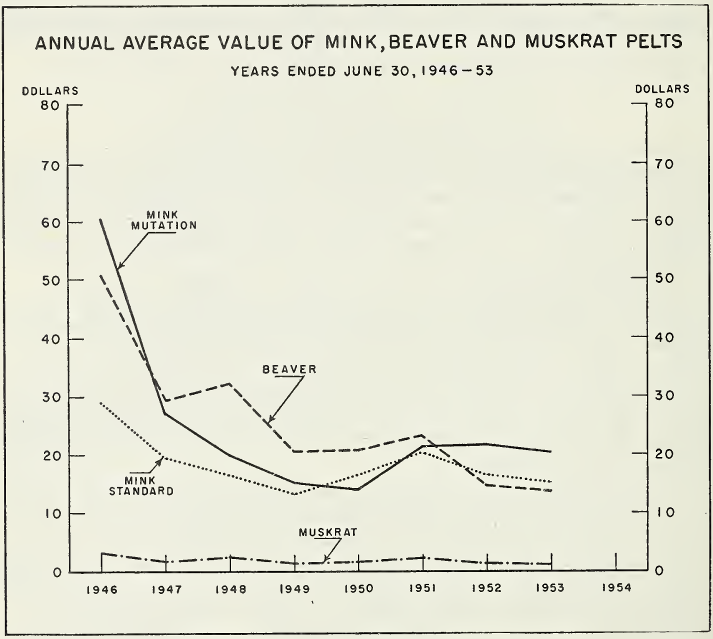
The fur industry was at one time the most vigorous and remunerative industry in Canada and it still contributes many millions of dollars annually to the national income. Until the end of the 19th century practically all Canadian furs were wild-caught and, although fur-farming has developed rapidly during the present century, trapping continues to provide nearly 57 p.c. of the income from raw furs produced in Canada.

Wild fur-bearers are still taken, even in settled areas of this country, but the populations of such animals have, in general, been so reduced by the advance of settlement that the principal trapping areas now lie in the Northwest Territories and the northern parts of the provinces. Many wild animals, including some important fur-bearers, are subject to marked fluctuations in numbers from year to year, and these fluctuations are often greatest and most nearly regular in northern regions. The number of pelts of certain wild species taken annually is notably affected by these fluctuations.

Another and perhaps more important factor governing the 'take' of wild-animal furs is the fluctuation in demand and in price consequent on changes in fashion. Thus, the vogue of recent years for short-haired furs, resulting from the desire of women to present as slender a silhouette as possible while wearing a fur coat, has caused a decrease in demand for fox and other long-haired pelts and a corresponding decrease in the number of such pelts taken by trappers. In areas, such as parts of the Northwest Territories, where these furs were formerly a staple source of income, this style change has resulted in serious hardship. It is obvious that the problems thus created cannot be solved by wildlife-management practices.

The most important aspects of management of the fur-trapping industry are: constant practical scientific research, maintenance of suitable habitat and its improvement where possible, sound and balanced regulation of the harvest of fur-bearers, provision of competent and adequate field staffs, and free education of trappers with respect to the principles of wildlife management. By these means many areas depleted of fur-bearers have once again become productive. Such means will become increasingly important in maintaining Canada's position as a major producer of raw furs.

Most of the fur resources of the provinces of Canada are under the administration of the respective provincial governments. Exceptions include those resources within the boundaries of the National Parks and the Indian reserves, which are the concern of the Federal Government. Also of Federal concern are the fur resources of Yukon Territory and the Northwest Territories. The Canadian Wildlife Service of the Department of Northern Affairs and National Resources (*see* pp. 40-41) is responsible for all Federal Government interests in wildlife resources except for those activities closely related to Indian affairs. The Service co-operates with interested provincial government and other agencies and handles federal interests in relevant national and international problems.



Section 2.—Provincial and Territorial Fur Resources and Management*

Newfoundland.—The Province of Newfoundland, stretching 900 miles northward from a latitude of 47° N. has climatic and habitat conditions suited to the raising of wild fur-bearing animals. The Island supports beaver, muskrat, marten, otter, lynx, fox, ermine and mink; mink were not indigenous to the Island but were introduced since 1935 through animals escaping from mink ranches. The Labrador area, also, is noted for its fine furs, particularly Labrador mink, and muskrat, marten, otter, beaver, fox, lynx, ermine and red squirrel are numerous enough to warrant trapping.

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* Provincial information received from the respective provincial governments and that for the Yukon Territory and Northwest Territories from the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

Wild fur trapping was a basic autumn and winter employment in the Province before World War II but defence construction and maintenance and industrial expansion so changed the economy of the people that trapping is now purely a part-time occupation engaged in only when other employment is not available. In fact the future of the industry may be impaired because few members of the younger generation are receiving the training necessary to the successful trapper.

Throughout the Province, the long-haired fur-bearers were once the basis of the fur industry and the decline in the prices of their fur was mainly responsible for the decline in trapping. As a result, the fox and lynx populations have built up so that they have assumed predator status and are not now protected by regulations.

Beaver management was started in 1935 and the Island of Newfoundland was repopulated by the transfer of live animals. This program proved so successful that during four open seasons in the years 1946-53 the catch numbered 30,000 beaver valued at $550,000. The success of this venture has led to the institution of a similar program in northern Labrador. The Labrador area, north of the Hamilton River drainage, has been without beaver for a hundred years.

Other fur bearers have not been managed except through the usual close seasons provided by regulations; for open seasons, regulations on fur-bearing animals differ according to climatic zone and provide for the taking of animals only during that season when the fur quality of the pelt is at its highest.

Prince Edward Island.—Wild fur-bearing animals are very plentiful on Prince Edward Island. Red fox, skunk and raccoon have become so numerous and their depredations among Island poultry flocks so alarming that all protection has been removed and bounties are paid on all three species. Beaver, too, have increased to the point where they have become a nuisance in this highly agricultural province: they have plugged road and railway culverts and their dams have flooded pulpwood stands and extensive tracts of farmlands. There is now an annual open season on beaver (Nov. 10-Dec. 31) and some trapping permits are issued in the out-of-season period.

Ten years ago muskrats had become quite scarce but their population has increased. They are now the best revenue producers because they are easily trapped, and more than 3,000 of them are taken annually. Their increase is attributed largely to the shortening of the trapping season from Nov. 1-Mar. 31 to Nov. 10-Dec. 31 and the strict enforcement of trapping regulations, which prohibit the setting of traps within ten feet of a muskrat house or den or the damaging of that house or den. Mink are also increasing in number, and are protected by the same shortened trapping season as are muskrat. Mink, moreover, is the only fur-bearing animal ranched to any extent in the Province.

Nova Scotia.—Nova Scotia is not a large producer of wild fur pelts. There is usually a six-week open season (Nov. 1-Dec. 31) for mink, otter, weasel and muskrat. The present low market prices for long-haired fur has discouraged the trapping of wildcat, fox and raccoon and these animals have been removed from the protected list. For the trapping of fur-bearers, other than beaver, no licence is required.

Since 1931, the Department of Lands and Forests has been redistributing live beaver, which had been almost completely trapped out before that time. To-day beaver is an important part of the trappers' catch in all the counties of the mainland, where a ten-day autumn season has been instituted. A few live beaver have also been introduced into Cape Breton Island over the years and a further release of 50 animals in 1953 completed this project but no open seasons have yet been proclaimed for the Island. The Department of Lands and Forests collects, packs and ships all beaver pelts and these are marketed in graded lots.

The red squirrel has become increasingly important as a fur-bearer and in 1954 the laws were changed to permit trapping during the regular season and shooting of these animals through the rabbit season which lasts until the end of February.

In Nova Scotia, trapping is not a full-time occupation but is a source of additional income to guides, woods workers and farmers who live near fur-producing areas.

Export figures are compiled as a by-product of the collection of royalties on furs exported. Exports of wild-animal furs in 1953-54 included: 29,498 deer hides, 553 red fox, 12 cross fox, 202 silver fox, 2,252 mink, 57,185 muskrat, 174 otter, 1,852 raccoon, 5,509 weasel, 248 wildcat, 82,743 red squirrel, 31 rabbit (snowshoe hare), 10 lynx, 3,165 beaver and a few pelts of skunk, seal, housecat, etc.

Quebec.—Wild fur is still a very important asset to the Province of Quebec, despite the invasion of the forest for industrial purposes. The total number of pelts taken in 1952-53 was 327,180 valued at $1,287,733. In the following season the number increased to 336,967 but the value dropped to $1,139,117. The average value of each of the basic furs—beaver, mink, muskrat, weasel and squirrel—was lower in the 1953-54 season, while prices of red and white fox remained the same. A few types, such as otter, fisher and raccoon, showed an increase in this respect. Pelts produced in 1953-54 included: muskrat, 190,457; squirrel, 45,929; weasel, 35,008; beaver, 19,079; mink, 12,896; seal, 8,073; white fox, 7,893; red fox, 4,841; raccoon, 3,370; deer, 3,115; otter, 2,269; lynx, 1,068; fisher, 1,032; skunk, 746; marten, 492; black, blue, cross and silver fox, 381; bear, 196; wolf, 88; and lynx cat, 34. On this take, the tax rate per pelt, which varies from one cent on squirrel to $2 on fisher, resulted in a royalty revenue to the Province of $70,660.

The administration of the fur resources of Quebec is under the jurisdiction of the Department of Game and Fisheries. Under the game laws and regulations, it is unlawful to hunt, catch or trap fur-bearing animals out of season, or in season without a licence; to use poison to hunt or kill any animals; to destroy or damage lairs or burrows of fur-bearing animals; or to keep in captivity, without special permit, any game protected by law. Regulations also cover the marketing of furs. It is not permissible to buy or sell any fur or pelt for commercial purposes without a licence; neither is it permissible to ship any fur outside the Province, or from one place to another within the Province, or to a tanner, without a permit attached to the bill of lading or without royalty having been paid and each pelt having been stamped or sealed.

By Order in Council of Aug. 17, 1945, the first registered game territory for trappers was set up by the Provincial Government in the Counties of East Abitibi and West Abitibi; in 1946 the County of Pontiac was organized, in 1947 Temiskaming and in 1952 the northern part of the County of Laviolette.

Regulations provide mainly that the land under lease must not exceed 50 sq. miles. The lessee, who pays an annual rental of $10, is responsible for his own land which he must occupy 15 days before the opening of the trapping season and evacuate 15 days after its close. Each year he must make an inventory of his land and report on the location of the beaver huts thereon. He must hold a special permit to hunt beaver and must prove that there are at least five huts on his land. The quota allowed at the outset is one beaver per hut; as the population increases, the quota is raised to 1½ beavers per hut. Beaver pelts must be specially labelled before marketing.

The present registered game territory extends over 30,000 sq. miles. More than 400 trappers hold permits and the quota allowed for the capture of beaver, negligible at the outset, was 5,227 in 1953-54. Three additional areas will be under production by 1956 and two areas are now (1954) under initial organization. Steps are being taken also to assist in the re-establishment of marten, the population of which has been steadily decreasing.

Ontario.—Ontario's fur and big game wealth is administered by the Division of Fish and Wildlife, Ontario Department of Lands and Forests, under the authority of the Ontario Game and Fisheries Act, the Wolf and Bear Bounty Act, and regulations thereunder.

In the production of wild-caught fur, Ontario leads all other Canadian provinces In the season of 1952-53 wild fur taken in Ontario was valued at almost $4,000,000. Included in this were the pelts of 122,600 beaver, valued at $1,612,000. Other important species, in order of decreasing total value, were muskrat, mink, otter, raccoon, fisher, weasel, marten, skunk, red fox and lynx.

Much credit for the high production of wild fur in Ontario is attributed to the efficient system of fur management now in effect. Throughout most of the chief fur-producing areas all trappers—the great majority of whom are Indians—are holders of Registered Trapline Licences. Under this system each trapper is registered with the Province as the sole permittee on a defined trapping area. Thus, competitive trapping has been almost entirely eliminated in all but the primarily agricultural areas of the Province, and the Department is in a position to set quotas to restrict the annual take of the less abundant species during times of scarcity. Such species as beaver, marten, fisher and lynx, comparatively rare in the Province a few years ago, have now attained populations which permit larger annual harvests to be taken than have been possible for many years.

Manitoba.—The fur resources of Manitoba represent one of the major phases of development by the government. Wild fur taken in 1952-53 totalled $2,116,157 and royalties to the Province amounted to $149,689. Value of the take was 16 p.c. below the 1951-52 figure.

Two major conservation projects have been responsible for the rehabilitation of wild fur. The Province has reclaimed old marshlands as Fur Rehabilitation Blocks where muskrat trapping is carried out under special permits. Since 1940 a total of 2,378,684 muskrats with a gross value of $5,002,166 has been taken from five such Fur Rehabilitation Blocks having a total area of 2,013,440 acres.

The second great stride in fur conservation has been the institution of Registered Traplines throughout the northern part of the Province. Beaver production in this area has risen from a forced close season until 1944 to a record crop of 22,850 beaver in 1951-52 with an estimated value of $359,560. Registration of traplines and areas is being steadily continued and this work is now reaching into the southern areas of the Province.

Total wild fur production decreased slightly in the 1952-53 season, reflecting lowering prices and a slackening of market demand. Manitoba, however, produced 24,197 beaver, 27,611 mink and 578,885 muskrats during the year, and other pelts taken included: squirrel, 241,067; weasel, 105,831; jack rabbit, 5,318; silver, blue, cross, white and red fox, 3,282; otter, 1,571, and lesser numbers of coyote, timber wolves, skunk, badger, fisher, marten, bear and lynx.

Fur ranching is also a major industry in the Province, with a harvest of $2,099,470 for the year ending Dec. 31, 1952. A total of 496 fur farms are licensed at present.

Saskatchewan.—The wild fur industry in Saskatchewan has undergone a period of rapid reorganization in the past ten years. A policy of one trapper for any one area has been inaugurated throughout the Province, a system providing security for trappers on their trap lines.

As a result of unethical practices and lack of management, beaver were almost extinct in Saskatchewan in 1944, and the trapping industry, in general, was at a very low ebb. A committee was appointed by the Government in 1945 to consider this unfortunate condition and to recommend steps necessary to encourage and assist trappers dependent on fish and game for their livelihood, particularly in isolated northern areas.

A Fur Marketing Service was established in Regina to give fur producers a local auction where their fur could be graded, displayed and sold to the highest bidder. In 1946, a Fur Conservation Agreement was concluded with the Federal Government by the Province in which the two Administrations agreed to spend certain moneys annually for the purpose of managing fur and game and improving wildlife habitat in the northern isolated areas for the benefit of the residents of those areas. The particular interest of the Federal Government in this region lay in the welfare of Treaty Indians who are their wards. Regulations under the Agreement gave Indians, métis and whites equal rights and security on their community, family or individual traplines. Local trappers' councils were elected by the trappers to act as spokesmen on their behalf when dealing with the Provincial Department of Natural Resources. During the subsequent five years 3,600 live beaver were moved from settled areas to new homes in the northern frontier where they were required for propagation purposes and for the improvement and maintenance of water levels. The result of this action has been a steady increase in the population of beaver, while the take has increased from approximately 400 pelts in 1943-44 to 23,000 in 1952-53.

In 1946, the south Saskatchewan muskrat trapping program was inaugurated. Each trapper in settled areas obtains a permit which describes the area on which he is authorized to trap muskrats and the quota he may take from it—based on the number of houses and bank runs located therein. It is estimated that five muskrats per house will survive a winter and that three may be trapped, leaving the others for propagation. Thus, general close seasons are a thing of the past and muskrats existing in any section can be trapped on the basis of the program. As a result, average yearly production since that date has been almost tripled in relation to the average yearly production for a similar period prior to 1946. The 1953 crop numbered almost 1,000,000 muskrats, the fourth highest ever recorded in the Province.

Other fur animals of economic importance are fisher, fox, lynx, marten, mink, otter, squirrel and rabbit. These animals have fluctuated in population as well as in pelt value in past years but the increased production of beaver and muskrats has helped stabilize the income of the trapper. Even though most fur prices have declined in recent years, the income received from Saskatchewan wild fur pelts has been maintained.

Badger, raccoon and wolverine are at present of little economic importance. Wolves and coyotes are on the predator list as well as foxes in settled areas and very comprehensive programs of control have been carried on to reduce the population of these animals.

By 1948, it was quite apparent that bounties did not have the desired effect of reducing the coyote population. A paid-hunter program was, therefore, introduced, in co-operation with the rural municipalities, in which all field personnel were directly responsible to the Department of Natural Resources. Under strict supervision these men used guns, traps, cyanide guns or coyote-getters and poison. The program has been extremely successful and coyotes are no longer a problem in settled areas. A $10 bounty has been continued on wolves, but bait treated with poison placed out on large lakes in isolated areas has been the most direct line of control. Here again, only employees of the Department are allowed to handle the poison. This work is becoming increasingly important not only to protect game that is necessary to the welfare of people living in the north country but also to reduce the chances of spreading the rabies epidemic which has been apparent in the West during the past two years as well as hydatid disease which has been found in some species of big game.

The weasel is a valuable fur bearer as well as a controller of rodents and, to increase its population, there has been a demand to have the close season extended throughout the greater part of the settled areas. However, closure in large areas does not seem to increase the weasel population, and the Department is carrying on biological studies to ascertain the effect of trapping on these valuable fur bearers at various degrees of intensity over a period of years.

Alberta.—The current wild fur trade of Alberta depends mainly on the fine fur group consisting of muskrat, ermine, beaver, mink and squirrel. This group accounted for 97 p.c. of the total value of the 1952-53 catch. The depressed condition of the market for long-haired coarse-furred pelts, including fox, skunk, lynx and rabbit, has kept the trapping of these animals at a low level for some years. During the 1952-53 season, the prices of furs generally remained low, except for a few species. Statistics show that more pelts were taken but the financial return to the trappers decreased.

Wild fur production in Alberta is controlled through the registered trapline system. During the past few years, except for very slight fluctuations, the number of registered traplines has remained fairly constant in the neighbourhood of 3,000, of which approximately 800 have been registered by Treaty Indians. The registration fee of $10 per line is paid by the Federal Government on behalf of the Indians. The stabilized trapline situation is accounted for by the prevalence of both muskrat and beaver. Before the institution of the system, the beaver was almost extinct in the Province, but in the ten years of beaver management the population has increased until it is now necessary to trap and remove beaver from areas where they are not wanted and where they cause considerable damage. Muskrat presents the same problem and if complaints, after investigation, are found to be justified special permits are issued for the removal of the animals. In 1952-53, 290 special muskrat permits and 719 beaver permits were issued.

Timber wolves, cougars and coyotes are considered predators and bounties were paid on all wolves and cougars killed between Apr. 1, 1952, and Mar. 31, 1953. Grizzly, black and brown bear are also classed as predatory and are unprotected throughout the Province.

Late in 1952 a special problem arose when a rabies epidemic broke out in the northern part of the Province. Trappers were employed to reduce the number of animals that might spread the disease and a double trapline was set on the edge of the forested area completely surrounding the settled area of the Province.

The wildlife resources of Alberta are administered by the Department of Lands and Forests under the Game Act and the Game Regulations.

British Columbia.—Effective control of fur-bearing animals in British Columbia commenced in 1926 when the registered trapline system went into effect. Under this system registered trappers are granted exclusive rights over a designated area. They are given a sketch map and legal description of the territory and are required to submit an annual 'return of catch' outlining the amount and kind of fur obtained. Through these returns an accurate check is made of the fur taken from each district. The system of registered traplines has worked remarkably well and is practically trouble-free.

Registered traplines cover all lands except private property, National Parks, Indian reserves, municipalities and certain other reserved areas. Trapping on private property may be pursued by the property owner himself or by someone to whom the owner has given permission, provided the trapper obtains a Special Firearms Licence which costs $10 and which must be held by all trappers; this licence entitles the legal holder to hunt all types of large and small game. In 1953, 2,933 such licences were granted, several hundred fewer than the usual yearly average. In addition, about 1,500 Indians were also engaged in trapping: because they are not required to be licensed at the present time, their take is not recorded and the fur records for the Province are incomplete to that extent.

Fur-bearers in the Province include bear, badger, beaver, fisher, fox, lynx, marten, mink, muskrat, otter, raccoon, skunk, squirrel, weasel and wolverine. Wolf, coyote, cougar and wildcat are classed as predators, although the pelts of these animals are sometimes marketable. There is no close season on the predators or on raccoon, skunk, wolverine and black and brown bear. Raccoons and foxes have become so numerous in certain parts of the Province that they also may be considered as predators.

Trapping seasons are confined to the winter months, usually commencing Nov. 1, but beaver may be taken in some areas as late as May 24. Beaver are covered by tagging regulations, under which the trapper is required to submit a yearly estimate of the number of beaver left on his trapline. Before setting out to trap, he makes known to the game warden of his area the number of animals he wishes to take. If it is not excessive he receives a tag which must be attached to each pelt. Trappers are not allowed to take more than 25 p.c. of the total population of beaver in their areas and this has played an important part in saving the beaver from extinction. In fact, the animals are now so numerous in some areas that it has become necessary to move them to districts where their activity will not cause damage. Nuisance animals are usually liberated on Indian traplines that need re-stocking.

Muskrat and squirrel are consistently the most important source of revenue among British Columbia furs. At one time marten was most in demand, but now mink appears to be taking precedence.

It is unlawful to ship fur out of or into the Province without permission and also to ship fur within the Province without plainly labelling the parcel with the sender's name, address and the number of his Special Firearms Licence. These regulations enable the game authorities to keep close control over fur shipments. Almost all of the raw fur business is centred in Vancouver and a game warden is posted there to supervise fur sales and fur traders. His regular visits to the traders keep infractions of the regulations at a minimum.

Low prices caused by changes in fashion and other factors such as the relatively high wages in construction and other industries, have made trapping fur for a livelihood unattractive in recent years. Little trapping is carried on to-day as compared with earlier years and, in consequence, fur bearers have become quite prevalent in all parts of the Province. The number of pelts upon which royalty was paid during 1953 was 450,117, of which 77 p.c. were squirrel; 11 p.c. muskrat; 4 p.c. mink; 3 p.c. weasel; and 2 p.c. beaver. The remainder included badger, bear, fisher, silver, red and cross fox, lynx, marten, otter, raccoon, skunk and wolverine.

Yukon Territory.—Registered trapline legislation, introduced in 1950, has been completed throughout Yukon Territory and 390 individual trapline registrations have been approved for the area extending from the southern border to the 65th parallel of latitude. North of the 65th parallel the trappers, who are nomadic bands of Indians, have registered on two group-trapping areas: one, for the Loucheaux Band No. 10 of Old Crow, has 32 registrations approved for heads of families, and the other, for the Loucheaux Band No. 7 of Fort McPherson, N.W.T., has 28 registrations. The initial registration fee for a trapline, either group or individual, is $10 and the annual renewal fee is $5.

During the past few years, trapline activities have been discouraged by low fur prices and trappers have been forced to find other occupations. As a consequence, the over-all picture of the fur population is good. Beaver, fox, lynx and squirrel are more prevalent and marten, mink and muskrat are more than holding their own in number; on the other hand, fisher, wolverine, otter and weasel are scarce. The predators, wolves and coyotes, appear to be increasing. Pelts taken in the 1952-53 season included: squirrel, 186,345; muskrat, 52,604; beaver, 2,202; marten, 1,923; weasel, 1,827; mink, 747; lynx, 408; red, white, cross and silver fox, 105; otter, 50; fisher, 42; and bear, 22.

The only fur-bearing animal on a quota is beaver: trappers are permitted to shoot or trap one beaver from each beaver house, including bank beaver. Trapping may be prohibited over an area covered by a trapline permit if this is considered necessary for the conservation of breeding stock. During the months of March and April in 1953 and again in 1954, a lethal control program was conducted against predators, particularly wolves. Poisoned bait was distributed by aircraft over a large number of lakes where wolf concentrations were observed.

Game-law enforcement is in the hands of the Royal Canadian Mounted Police; in addition, six Federal Park Wardens and 10 Class A Guides act as game guardians.

Northwest Territories.—Utilization of fur and game resources in the Northwest Territories is governed by the Northwest Territories Game Ordinance. Trapping privileges are available only to resident Indians and Eskimos and those white persons who were licensed to hunt and trap in the Territories prior to 1938 and who have continued to reside therein. Provision is also made for the issue of General Hunting Licences to the descendants of these white persons.

Because of the nomadic nature of the Eskimo and the large areas over which he must hunt and trap, there is no provision for trapline registration in the Franklin and Keewatin Districts, though a number of game preserves have been established in the Territories to preserve the fur and game therein for the natives. Largest of these is the Arctic Islands Game Preserve comprising all the Arctic Islands north of the mainland plus a large area on the mainland.

Provision under the Game Ordinance for the establishment of registered traplines became effective in the Mackenzie District on July 1, 1949. Under this legislation exclusive trapping rights in limited areas are granted to the trappers to encourage them to manage carefully the fur-bearers found there and to effect improvements leading to increased fur production. The Mackenzie District is divided into 12 Warden Districts (including Wood Buffalo Park) covering 386,615 sq. miles —over half under registration. There are 319 individual registered areas and 118 group registered areas.

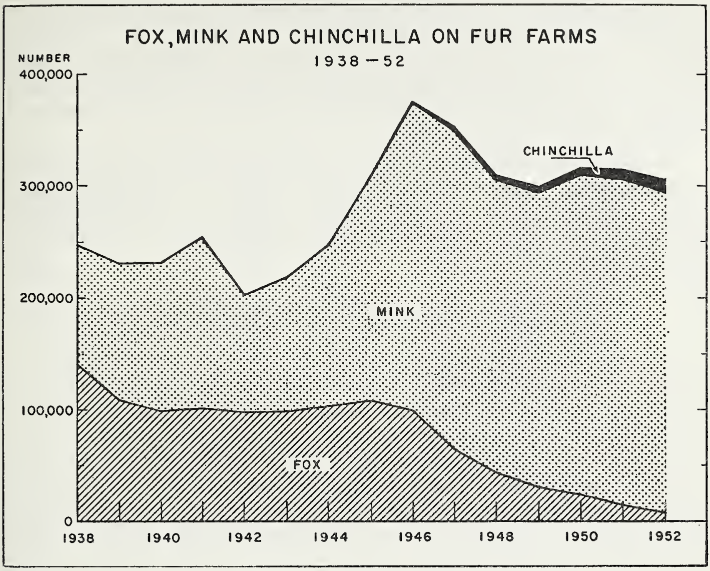
The downward trend of the fur market during the past few years has caused trappers to lose interest in trapline activities: many have obtained employment elsewhere and others have refused to trap very far away from the settlements. The fur take reflects this lack of interest: though lynx, marten, otter and weasel have remained steady and slight increases are noted for fisher, wolf and wolverine, the take of beaver, fox, mink, muskrat and squirrel has shown a decided decrease. Pelts taken in the 1952-53 season were: muskrat, 250,367; squirrel, 68,611; white fox, 36,474; weasel, 12,418; beaver, 6,339; mink, 5,395; marten, 5,002; lynx, 1,575; black, blue, cross, red and silver fox, 1,227; wolf, 531; otter, 143; wolverine, 102; and fisher, 30.

Beaver and marten are taken on a quota basis: trappers are permitted to shoot or trap one beaver for each occupied beaver lodge. In areas where beaver are scarce and where conditions are suitable, transplant operations are carried out. Close seasons are established when it becomes apparent that a particular species of fur-bearing animal is being over-trapped. A wolf-poisoning program is carried out in areas where these animals have become detrimental to desirable wildlife.

Game-law enforcement is in the hands of wardens stationed at the principal settlements in the Mackenzie District; elsewhere in the Territories it is handled by the Royal Canadian Mounted Police.

Section 3.—Fur Farming

Fur-bearing animals were first raised on farms in Prince Edward Island around 1887 and in Quebec in 1898; to-day fur farming is carried on in all provinces of Canada. Foxes were the first fur-bearers to be raised in captivity on a commercial scale but mink, chinchilla, raccoon, marten, fisher, fitch, nutria and others are now being reared. Mink are the most numerous, followed by the various types of foxes and these two far outnumber all other kinds of fur-bearing animals.



There was a slow and steady increase in the number of fur farms until 1920 when 587 were reported, followed by a period of more rapid growth from 1920 to 1938 when the number reached 10,454. After the outbreak of hostilities in 1939 and the loss of the London and other European markets, prices declined; many fur farms went out of production. Though prices rose considerably after the War, operating costs also increased and the number of fur farms, particularly those conducted in conjunction with other farming operations, continued to decrease. By 1952, only 2,518 reported but, despite this decrease in number, volume of production has been maintained.

Though the earliest and most intensive fur-farming operations were concerned with fox-raising in the Maritime Provinces and Quebec, the sharp decline in the popularity of fox furs and the steady rise in mink resulted in Ontario and Western Canada taking predominant positions in the raising of fur animals. A distribution of the 306,523 animals on fur farms at Dec. 31, 1952, showed 14 p.c. in British Columbia, 48 p.c. in the Prairie Provinces, 25 p.c. in Ontario, 8 p.c. in Quebec and 5 p.c. in the Maritime Provinces.

Furs have for centuries been used for clothing and adornment and the demands of fashion, encouraging the development of new colour phases in fox and mink, have been an important incentive to the fur-farming industry. There have always been mink mutations in the wild state but these unusual animals stood little chance of survival and such pelts were exceedingly rare. Starting with wild-caught mink, breeders have, by cross-breeding, produced mink furs in a variety of colours. Among the earliest mutations to appear was an attractive bluish-gray mink which became known as 'Platinum' mink. Then mutations were cross-bred and a still greater profusion of colour combinations appeared, notably the 'Sapphire' mink, a cross of the steel-blue 'Aleutian' with the blue-gray 'Platinum'. Other unusual colour patterns are the 'Royal Pastel', a beautiful brown mink with a bluish cast, and an exquisite snow-white mink.

In 1937, some chinchillas were imported into Saskatchewan and later into other provinces. These valuable little animals have a rich, soft fur. Although the original cost of chinchillas is high the outlay for raising them is small. A steady increase in the number on farms has resulted and 11,571 were reported in Canada in 1952 valued at $2,122,889.

Section 4.—Statistics of Fur Production*

Total Fur Production Statistics.—Early records of raw-fur production were confined to the decennial censuses, when account was taken of the number and value of pelts obtained by trappers. In 1920, the Dominion Bureau of Statistics commenced an annual survey of raw-fur production, basing the statistics on information supplied by the licensed fur traders, and continued this for some years. More recently, annual statements based on royalties, export tax, etc., have been made available by the provincial game departments (except Prince Edward Island), and these statements are now used in the preparation of the statistics issued annually by the Bureau. Figures for Prince Edward Island are based on returns supplied to the Dominion Bureau of Statistics by fur traders in that Province.

1.—Pelts of Fur-Bearing Animals Produced, with Percentage Sold from Fur Farms, Years Ended June 30, 1934-53

Year	Pelts		Percentage of Value Sold from Fur Farms[1]
	Number	Value	
		$	
1934	6,076,197	12,349,328	30
1935	4,926,413	12,843,341	31
1936	4,596,713	15,464,883	40
1937	6,237,640	17,526,365	40
1938	4,745,927	13,196,354	43
1939	6,492,222	14,286,937	40
1940	9,620,695	16,668,348	31
1941	7,257,337	21,123,161	26
1942	19,561,024	24,859,869	19
1943	7,418,971	28,505,033	24
1944	6,324,240	33,147,392	28
1945	6,994,686	31,001,456	31
1946	7,593,416	43,870,541	30
1947	7,486,914	26,349,997	37
1948	7,952,146	32,232,992	37
1949	9,902,790	22,899,882	33
1950	7,377,491	23,184,033	34
1951[2]	7,479,272	31,134,400	36
1952	7,931,742	24,215,061	43
1953	7,568,865	23,349,680	43

[1] Approximate. [2] Figures prior to 1952 do not include Newfoundland.

Ontario leads the provinces in value of fur production, accounting for 26 p.c. of the total in the 1952-53 season. The numbers of pelts taken in Alberta and in Saskatchewan were greater than in Ontario but, in these provinces, squirrel pelts, which are lower-priced furs, made up a large part of the total. In Ontario the more valuable mink and beaver pelts brought the total value to a higher level.

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* Revised in the Agriculture Division, Dominion Bureau of Statistics.

2.—Pelts of Fur-Bearing Animals Produced, by Province, Years Ended June 30, 1952 and 1953

Province or Territory	1952			1953		
	Pelts	Value	Percentage of Total Value	Pelts	Value	Percentage of Total Value
	No.	$		No.	$	
Newfoundland	53,183	151,521	0·6	35,825	72,297	0·3
Prince Edward Island	15,679	215,756	0·9	13,894	111,759	0·5
Nova Scotia	123,934	527,013[r]	2·1	196,717	489,491	2·1
New Brunswick	79,575	210,916	0·9	63,311	214,900	0·9
Quebec	394,647	2,343,787	9·7	395,761	2,157,388	9·2
Ontario	1,111,715	6,012,145	24·9	1,255,189	6,040,596	25·9
Manitoba	1,239,173	4,461,815	18·4	1,122,945	4,215,639	18·0
Saskatchewan	1,164,379	2,139,569	8·8	1,493,384	2,667,532	11·4
Alberta	2,216,112	4,492,376	18·6	1,828,586	4,199,326	18·0
British Columbia	665,826	2,038,738	8·4	528,221	2,056,406	8·8
Yukon Territory	171,274	173,252	0·7	246,379	247,001	1·1
Northwest Territories	696,245	1,448,173	6·0	388,653	877,345	3·8
Canada	**7,931,742**	**24,215,061**[r]	**100·0**	**7,568,865**	**23,349,680**	**100·0**

The average prices of the main kinds of pelts taken in 1952-53 were generally lower than in 1951-52. Mutation mink pelts dropped from $21.99 to $20.55 and standard mink from $16.89 to $15.18. Most types of fox pelt decreased in price, silver fox falling from $11.48 per pelt to $7.43, but white fox advanced from $8.16 to $8.86. The average value of beaver pelts was $13.90 in 1952-53 compared with $14.91 in the previous year, muskrat was $1.26 compared with $1.42, squirrel increased slightly from 43 cents to 45 cents, and otter advanced from $21.10 to $22.62.

3.—Pelts of Fur-Bearing Animals Taken, by Kind, Years Ended June 30, 1952 and 1953

Kind	1952			1953		
	Pelts	Total Value	Average Value	Pelts	Total Value	Average Value
	No.	$	$	No.	$	$
Badger	508	203	0·40	215	158	0·73
Bear, white	420	8,470	20·17	598	1,135	18·98
Bear, unspecified	330	567	1·72	465	9,460	2·03
Beaver	222,932	3,323,274	14·91	224,606	3,121,608	13·90
Coyote or prairie wolf	12,983	33,154	2·55	9,099	19,851	2·18
Ermine (weasel)	353,435	542,520	1·53	546,344	718,642	1·32
Fisher	5,274	121,453	23·03	5,533	112,347	20·30
Fox, blue	964	7,469	7·75	582	4,033	6·93
Fox, cross	3,423	7,498	2·19	2,314	5,384	2·33
Fox, new-type	6,281	88,655	14·11	5,058	40,834	8·07
Fox, red	28,359	34,270	1·21	23,697	20,655	0·87
Fox, silver	37,465	429,920	11·48	24,282	180,296	7·43
Fox, white	53,654	437,549	8·16	40,710	360,760	8·86
Fox, other	82	455	5·55	41	156	3·80
Lynx	7,324	38,273	5·23	13,099	72,759	5·55
Marten	16,976	276,781	16·30	16,574	193,296	11·66
Mink, standard	593,514	10,025,587[r]	16·89[r]	642,234	9,751,580	15·18
Mink, mutation	112,476	2,473,375	21·99	143,555	2,950,315	20·55
Muskrat	3,292,110	4,675,562	1·42	3,440,664	4,322,093	1·26
Otter	13,467	284,096	21·10	14,612	330,480	22·62
Rabbit	42,712	8,241	0·19	55,692	13,131	0·24
Raccoon	29,029	54,875	1·89	32,986	61,354	1·86
Skunk	13,287	8,623	0·65	10,315	10,525	1·02
Squirrel	3,082,342	1,319,468	0·43	2,313,455	1,037,172	0·45
Wildcat	662	360	0·54	501	405	0·81
Wolf	1,129	4,728	4·19	1,121	5,341	4·76
Wolverine	568	9,238	16·26	406	4,589	11·30
Other	36	397	...	107	1,321	...
Totals	**7,931,742**	**24,215,061**[r]	...	**7,568,865**	**23,349,680**	...

Fur-Farm Statistics.—The post-war downward trend in number of fur farms continued through 1952 when there were 2,518 farms compared with 3,072 in 1951. From 1951 to 1952 the value of fur animals on these farms dropped from $10,195,561 to $9,560,702 and the operating revenues from $12,400,000 to $11,100,000.

The number of farms reporting foxes in 1952 decreased by 38 p.c. from 1951 to 380, and the number of foxes on these farms was lower by 49 p.c., totalling 7,366 and valued at $140,261. Mink farms also declined from 2,324 in 1951 to 2,089 in 1952 and the number of mink on farms dropped to 287,213 valued at $7,284,860 in 1952, which was 4,912 fewer in number and $737,548 less in value than in 1951. Production of fox pelts in 1952 was 42 p.c. lower than in 1951 and that of mink pelts increased 7·5 p.c.

4.—Fur Farms and Value of Fur-Bearing Animals, by Province, 1949-52

Province	Fur Farms				Values of Fur-Bearing Animals on Fur Farms			
	1949	1950	1951	1952	1949	1950	1951	1952
	No.	No.	No.	No.	$	$	$	$
Newfoundland	..	..	..	..	..	..	..	..
Prince Edward Island	179	127	88	60	158,108	146,908	101,565	75,845
Nova Scotia	163	130	110	82	154,987	184,051	195,171	143,795
New Brunswick	136	105	95	72	109,319	125,469	149,377	103,351
Quebec	718	561	389	248	1,179,718	1,306,429	1,043,629	1,112,157
Ontario	1,104	952	903	628	2,540,036	2,977,794	3,205,643	2,865,994
Manitoba	509	489	467	432	1,236,157	1,686,174	1,644,672	1,655,693
Saskatchewan	253	203	180	157	510,402	564,484	556,443	430,380
Alberta	657	601	519	503	1,576,938	1,978,989	1,768,280	1,553,926
British Columbia	330	324	321	336	1,277,560	1,473,988	1,530,781	1,619,561
Totals	**4,049**	**3,492**	**3,072**	**2,518**	**8,743,225**	**10,444,286**	**10,195,561**	**9,560,702**

5.—Fur-Bearing Animals on Fur Farms, as at Dec. 31, 1949-52

(Exclusive of Newfoundland)

Kind of Animal	1949		1950		1951		1952	
	No.	Value	No.	Value	No.	Value	No.	Value
		$		$		$		$
Chinchilla	5,685	1,428,708	6,053	1,350,860	8,530	1,799,963	11,571	2,122,889
Fisher	116	10,600	99	9,860	45	4,520	31	1,910
Fitch	85	519	43	225	[1]	[1]	[1]	[1]
Fox, blue	738	28,220	557	21,359	269	341,839	148	140,261
Fox, new-type	9,734	265,694	6,857	187,574	4,260		2,783	
Fox, silver	19,578	504,799	16,279	431,267	9,707		4,380	
Fox, other	150	1,839	118	1,628	100		55	
Marten	371	30,790	327	31,020	255	21,970	166	9,305
Mink	263,673	6,469,273	286,152	8,408,379	292,125	8,022,408	287,213	7,284,860
Nutria	67	1,650	38	1,430	58	4,175	[1]	[1]
Raccoon	147	1,009	114	623	124	623	132	539
Other	8	124	9	61	12	63	44	938
Totals	**300,352**	**8,743,225**	**316,646**	**10,444,286**	**315,485**	**10,195,561**	**306,523**	**9,560,702**

[1] Included in "Other"

6.—Value of Fur-Bearing Animals and of Pelts Sold from Fur Farms, 1949-52

(Exclusive of Newfoundland)

Kind of Animal	1949		1950		1951		1952	
	Animals	Pelts	Animals	Pelts	Animals	Pelts	Animals	Pelts
	$	$	$	$	$	$	$	$
Chinchilla	404,161	150	518,750	—	416,318	[1]	326,122	[1]
Fisher	975	177	[1]	[1]	[1]	1,436	[1]	209
Fitch	75	280	[1]	[1]	[1]	[1]	[1]	[1]
Fox, blue	210	37,802	185	20,277	8,248	8,167	4,432	4,093
Fox, new-type	2,642	427,964	4,287	283,573		158,368		68,769
Fox, silver	16,615	505,404	14,567	463,181		369,478		155,468
Fox, other	92	1,788	13	930		1,194		433
Marten	6,081	1,210	2,754	2,841	6,313	2,519	[1]	1,043
Mink	288,411	7,820,747	431,212	10,064,005	547,647	10,875,371	541,516	10,026,982
Nutria	80	2	[1]	[1]	[1]	[1]	[1]	[1]
Raccoon	42	26	[1]	[1]	[1]	39	[1]	34
Other	300	—	730	700	1,649	1,483	1,894	3,908
Totals	**719,684**	**8,795,550**	**972,498**	**10,835,507**	**980,175**	**11,418,055**	**873,964**	**10,260,939**

[1] Included in "Other".

Section 5.—Marketing of Furs

Montreal, Que., is the leading Canadian fur mart, although auction sales are also held at Vancouver, B.C., Edmonton, Alta., Regina, Sask., and Winnipeg, Man. The Saskatchewan Government maintains a Fur Marketing Service at Regina to assist producers in that Province.

Grading.—The grading of furs to secure uniformity was introduced in 1939 by the Federal Department of Agriculture so that furs may be purchased by grade without the necessity of buyers from other countries personally examining the pelts. Grading offers many advantages to the producer as well as to the trade in general. It educates the rancher as to the proper value of his pelts and creates an incentive to improve the quality of the product; it furnishes guidance in the planning of future matings, aids in raising the standard of quality of the entire crop of pelts and helps in advancing the level of prices for high-quality pelts.

Exports and Imports.—Before World War II, Canada marketed fur pelts mainly in the United Kingdom but that market was practically dormant during the war years and the fur trade was carried on mainly with the United States. A definite revival of trade with the United Kingdom took place after the War but almost 80 p.c. of Canadian fur exports still go to the United States.

The Canadian fur trade, both export and import, is chiefly in undressed furs, the value of dressed and manufactured furs going out of or coming into Canada being a comparatively small proportion of the total. Exports consist largely of furs which Canada produces in greatest abundance, mink being the most valuable followed by beaver, muskrat and fox. On the other hand, furs such as Persian lamb, certain types of muskrat, rabbit, squirrel, sheep and lamb, which are not produced to any extent in Canada, make up the major portion of the imports.

Exports and imports of all furs to and from the United States, the United Kingdom and all countries are given for the years 1952 and 1953 in Table 7.

7.—Exports and Imports of Furs, by Kind, 1952 and 1953

Kind of Fur	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	Exports					
	$	$	$	$	$	$
Undressed—						
Beaver	820,565	2,408,969	3,480,460	984,890	1,898,689	3,070,087
Ermine	69,648	363,729	433,399	128,598	491,883	621,026
Fisher	95,741	31,389	151,681	91,068	55,755	155,399
Fox, all types	440,476	538,764	1,047,008	194,037	389,587	644,370
Lynx	81,934	3,736	86,618	50,806	24,734	76,757
Marten	50,393	228,870	281,710	18,372	143,152	164,401
Mink	1,034,963	14,061,757	15,161,795	871,664	12,799,444	13,792,160
Muskrat	542,125	844,035	1,416,453	912,300	578,192	1,508,141
Otter	11,393	103,968	115,451	27,293	41,063	75,237
Rabbit	742	31,161	31,903	108	19,053	19,161
Raccoon	9,466	67,987	77,453	13,338	60,894	75,032
Seal	36,993	—	36,993	—	810	810
Skunk	41,809	16,139	58,855	9,706	11,436	21,407
Squirrel	769,511	32,696	813,989	562,534	54,655	618,835
Weasel	11,264	160,265	171,529	14,684	143,242	157,926
Wolf	9,683	69,822	79,505	5,722	27,711	33,498
Other	22,144	13,189	62,306	7,940	20,600	35,681
Dressed—						
Fox	—	—	5,132	—	—	2,568
Other	204	282,364	372,016	1,102	480,769	663,093
Manufactured	3,846	483,298	521,275	2,786	567,245	605,027
Totals	**4,052,900**	**19,742,138**	**24,405,531**	**3,896,948**	**17,808,914**	**22,340,616**
	Imports					
	$	$	$	$	$	$
Undressed—						
China and Jap mink	—	122,702	122,702	—	52,854	101,922
Fox	21,798	30,532	56,165	8,598	14,740	23,338
Kolinsky	72,176	46,706	145,678	185,772	—	253,017
Marine	—	192	192	—	3,204	3,204
Mink	20,996	1,626,513	1,647,629	37,157	2,066,675	2,123,205
Muskrat	74,946	4,295,741	4,597,657	1,664	4,247,601	4,250,425
Opossum	—	5,180	5,180	—	11,382	11,382
Persian lamb	1,235,900	6,484,650	9,459,602	1,158,074	4,209,819	5,816,202
Rabbit	8,994	429,490	1,011,136	—	192,394	728,393
Raccoon	—	259,829	259,829	—	417,555	417,555
Sheep and lamb	—	390,001	675,667	132,851	517,290	858,945
Squirrel	38,204	193,320	282,981	36,804	153,815	274,970
Other	149,675	640,039	1,513,186	205,503	728,273	1,643,047
Dressed—						
Astrakhan, Russian hare	1,519	15,711	22,966	—	2,099	2,099
Rabbit	7,667	10,056	56,917	18,188	8,985	92,031
Sheep skins	469	334,201	346,662	3,467	346,222	367,864
Hatters furs	31,560	576,368	954,612	121,971	695,742	1,360,553
Other	44,174	1,099,532	1,160,089	48,957	1,458,143	1,606,996
Manufactured	325,398	847,945	1,194,973	296,664	745,631	1,076,579
Totals	**2,033,476**	**17,408,708**	**23,513,823**	**2,255,670**	**15,872,424**	**21,011,727**

Section 6.—The Fur-Processing Industry*

The rather general term "fur processing" includes the fur-dressing and -dyeing industry and the fur-goods industry. The former is concerned with the dressing or dyeing of pelts on a custom basis, and the latter is a manufacturing industry that makes up fur goods such as coats, scarves and gloves.

Fur-dressing and -dyeing industry statistics were first recorded in 1917, when 12 establishments with 512 employees reported receipts of $1,071,805. Eight establishments in 1924 reported a revenue of $1,120,895, expenditures of $162,013 on dyes, chemicals and other materials used, and expenditures of $561,233 on salaries and wages to 539 employees. Of the 3,473,909 skins treated in that year, muskrat pelts made up 47 p.c., rabbit 19 p.c. and squirrel 10 p.c.

The greatest number of skins treated was reported in 1941, when 14,592,079 were handled, but almost 53 p.c. of those were rabbit skins so that the revenue for that year was only $2,476,289. The record revenue reported was that for 1949, when $6,691,418 was received and rabbit skins constituted 38 p.c. of the total processed.

In 1953, the number of skins treated was 11,001,366, of which muskrat comprised 44 p.c., squirrel 15 p.c., Persian and other types of lamb 14 p.c. and rabbit 13 p.c.

8.—Principal Statistics of the Fur-Dressing Industry, 1950-53

Item		1950	1951	1952	1953
Establishments	No.	22	20	17	16
Employees on Salaries—					
Male	No.	120	100	82	74
Female	"	44	37	30	24
Employees on Wages—					
Male	No.	1,187	940	942	900
Female	"	282	228	226	216
Salaries paid	$	653,165	600,593	460,998	440,036
Wages paid	$	2,766,881	2,538,783	2,865,534	2,749,531
Cost of materials used (dyes, chemicals, etc.)	$	1,294,259	1,076,825	1,177,345	1,026,173
Pelts treated	No.	13,639,110	9,768,616	12,085,066	11,001,366
Amount received for treatment of furs	$	6,514,772	5,302,761	6,061,850	5,920,014

Statistics for the fur-goods industry, on a comparable basis, are available from 1921, when 219 establishments reported a gross value of production of $13,639,609, employees numbered 2,621 and salaries and wages amounted to $3,013,706. Cost of materials used in the manufacturing process totalled $8,118,833. Principal statistics for the industry for the years 1950 to 1953 are given in Table **9**.

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* Prepared in the Animal Products Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

9.—Principal Statistics of the Fur-Goods Industry, 1950-53

Item		1950	1951	1952	1953
Establishments	No.	609	612	596	600
Employees on Salaries—					
Male	No.	1,250	1,203	1,220	1,122
Female	"	359	349	355	314
Employees on Wages—					
Male	No.	2,728	2,625	2,629	2,745
Female	"	1,992	1,907	1,765	1,764
Salaries paid	$	4,755,675	4,755,383	5,033,155	4,743,807
Wages paid	$	9,841,027	9,657,070	10,388,597	11,103,947
Cost of materials used	$	38,309,241	38,100,218	41,909,453	39,639,350
Value of products	$	61,930,099	61,209,546	66,245,562[1]	63,991,716[1]

[1] Value of factory shipments. *See* text p. 633.

Changes in living habits and standards in the past quarter-century are reflected in the type of goods produced by the fur-goods industry. For example, in 1921 there were 31,604 ladies' fur coats and jackets produced whereas, in 1953, the number was 220,717. The manufacture of men's fur coats showed a decided reversal in the market; there were 5,692 men's fur or fur-lined coats manufactured in 1921 but only 352 in 1953.

CHAPTER XV.—MANUFACTURES

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

This Chapter deals with manufacturing in Canada in three Parts. Part I briefly considers post-war growth of manufacturing within the historical framework of Canadian development with major emphasis on the year 1952 and the fifteen leading industries. Part II provides general statistical analyses including: manufacturing statistics from 1917; detailed treatment of current production under various groupings and individual industries; and principal factors in manufacturing production such as capital, employment, salaries and wages and size of establishment. Part III deals with the provincial and local distribution of manufacturing production.

PART I.—REVIEW OF CANADIAN MANUFACTURING

Canada is to-day an industrialized society, obtaining its major source of income and finding its major source of employment in manufacturing operations. This process, beginning in the 1860's, gathered momentum in World War I but was not an economic force until the early years of World War II. Nevertheless, some Canadian industries became competitive with those of other countries in both quality and price long before World War II. One of the earliest examples was the farm implements industry; another was the pulp and paper industry, which was able to compete successfully in important foreign markets in the 1920's and still remains the leading manufacturing industry.

The first phase of development took place between 1867 and 1900. Rising prosperity until 1873 brought about continuing expansion of manufacturing capacity particularly in such fields as flour and grist-mill products, leather boots and shoes, and log products such as lumber, lath and shingles. Manufacturing weathered the depressed economic conditions of the latter part of the 1870's and a good part of the 1880's, aided particularly by the high quality of Canadian natural resources and the fact that they could be developed at low cost, partly because of their growing accessibility as the railway network expanded in Canada and partly because cheap ocean transport became available.

The period 1900 to 1920 was characterized by rapid population increase and the opening up of the West. The program of railway construction, the growth of cities and towns, the equipping of western farms and the extension of community facilities in both Eastern and Western Canada gave great impetus to the production of capital goods. World War I brought about a notable acceleration of industrial diversification with particularly striking effects on the refining of non-ferrous metals, the expansion of the steel industry and the shipbuilding and aircraft industries. Following the War, international competition became very keen and Canadian industries experienced some adjustment, particularly in the short though severe recession of 1921. This check was temporary and expansion was resumed up to the crest of 1929 with particular emphasis on pulp and paper, transportation equipment, non-metallic mineral products and chemicals. As a result of the depression of the 1930's when economic activity was at a low ebb, Canadian industries were unprepared for the avalanche of military orders following 1939; nevertheless, conversion to war production was accomplished in two years. Expansion of productive capacity in manufacturing during the war years was particularly striking in such fields as tool making, electrical apparatus, chemicals and aluminum.

About two-thirds of the industrial structure created during that period was found to be adaptable to peacetime uses after the War. Although reconversion, modernization and expansion necessitated large capital outlays and although supply shortages slowed down the implementation of the program, most of the work was completed by the end of 1947. From 1950 onward, two developments contributed particularly to manufacturing expansion in Canada. First, the intensive search for new minerals and other natural resources brought about a number of important discoveries and rapid development followed in such fields as crude oil, natural gas, iron ore, non-ferrous metals and a number of less important metals. This new development and the resulting need for equipment for exploration and processing gave great impetus to Canadian industries producing capital goods. Further, the availability of a greater quantity and variety of indigenous raw materials led to the creation of more processing capacity and to the establishment of advanced raw-material and power-using industries. Foremost among these was the chemical industry, which became increasingly diversified. In particular, major discoveries of oil and gas made feasible the establishment of such industries in central Alberta notwithstanding the great distance to the principal markets of the North American Continent.

The second development was the outbreak of the war in Korea, leading to the establishment of a three-year $5,000,000,000 defence program. Three industries in particular received great stimulus from the rearmament program: the aircraft industry, which, for the first time, began production of jet aircraft and jet aircraft engines; the electronics industry, which produced a great variety of new items, from equipment for Canada's northern radar screen to infantry pack radio sets; and the shipbuilding industry, which not only revived after several years of decline following the end of World War II but which drew increasingly on Canadian equipment-producing industries to fit out, power and arm the newly built naval vessels. A major characteristic of the expansion of Canadian manufacturing industries encouraged by the rearmament program was the adaptability of many of the new developments to civilian use. An outstanding example was the comparative ease with which a television industry was established in Canada.

Developments in 1952.—The manufacturing industry continued to advance during 1952 under the impetus of a strong consumer goods market, increased private investment spending for construction, machinery and equipment as well as higher governmental expenditures for goods and services. At the beginning of the year, over-all production and employment levels were about the same as in 1951 but the changing pattern of demand was bringing about a shift in emphasis away from the consumer and toward an improvement in Canada's industrial and defence potential. However, by mid-1952 a considerable strengthening in consumer demand had taken place. The removal, early in the year, of the special excise taxes on durables and the suspension of consumer credit regulations stimulated hard-goods purchasing. In addition, average personal income in real terms was rising significantly. Consumers appeared to be showing less resistance to prevailing prices, which had roughly stabilized, and many buyers, who in the post-Korean buying boom had bought ahead of their current needs, seemed to be returning gradually to the market for replacement needs. This increase in consumer demand continued throughout the second half of 1952 but was not enough to cause a resurgence of inflationary pressures. However, it did help to eliminate some of the soft spots that had existed previously and it also contributed toward some firming in over-all activity.

The gross value of production of the manufacturing industries continued its upward trend in 1952 reaching $16,982,687,035, a 3·6-p c. increase over 1951. Part of the 1952 advance in value was accounted for by an increase of 2·2 p.c. in the physical volume of production and the balance by price increases. The index of physical volume of production stood at 246·3 (1935-39 = 100), being four points above the record wartime level attained in 1944. Accompanying the rise in output was an increase of 2·4 p.c. in the number of persons employed and of 11·0 p.c. in the amount of salaries and wages paid. Salary and wage payments at $3,637,620,160 were the highest on record, and exceeded the previous high reported in 1951 by $361,339,243.

No definite trend was established in 1952. Although the durable goods industries as a unit operated at a higher level of production than the consumer industries, both divisions reported advances and declines. In the durable goods sector the transportation equipment group reported the greatest advance in production with an increase of 18·4 p.c. followed by non-metallic mineral products with an increase of 1·2 p.c. and electrical apparatus and supplies with 0·2 p.c. The iron and steel products group was practically unchanged, while the wood group reported a decline of 3·0 p.c. and non-ferrous metal products a decline of 1·1 p.c. In the non-durable goods sector the greatest increase in the volume of production was reported by the tobacco group with an increase of 14·2 p.c., followed by leather products with 9·4 p.c., products of petroleum and coal 7·3 p.c., foods and beverages 5·2 p.c., clothing 3·1 p.c. and chemicals and allied products 1·7 p.c. A decline in volume amounting to 11·7 p.c. was reported by the textiles (except clothing) group, of 6·8 p.c. by rubber products, of 5·0 p.c. by paper products, and of 1·2 p.c. by printing, publishing and allied industries.

Manufacturing establishments reporting in 1952 numbered 37,929. Of these, 948 were located in Newfoundland, 224 in Prince Edward Island, 1,533 in Nova Scotia, 1,077 in New Brunswick, 12,024 in Quebec, 13,172 in Ontario, 1,531 in Manitoba, 1,022 in Saskatchewan, 2,150 in Alberta, 4,225 in British Columbia and 23 in the Yukon and Northwest Territories. These plants furnished employment to 1,288,382 persons who received $3,637,620,160 in salaries and wages. They also produced goods with a selling value at the factory of $16,982,687,035 and spent $9,146,072,494 for materials, while the value added by manufacture totalled $7,443,533,199. It should be remembered that the value added by manufacture does not represent the manufacturers' profits. The value added is obtained by subtracting the cost of materials, including fuel and electricity, from the value of products. The difference represents the value added to the materials by labour. It is this difference which the employer of labour uses to pay for the labour itself, the overhead expenses, interest and profits. Compared with the previous year, there was an increase of $502,586,416 in the value added by manufacture.

Development in Canada's Leading Industries.—In Canada fifteen leading industries account for approximately half the value of manufacturing production. The largest industry, pulp and paper, had a gross value of output of $1,158,000,000 in 1952. In little over half a century the Canadian industry has become one of the major enterprises of the world. Several factors were responsible for this growth: Canada possesses over half of the pulpwood resources of North America, cheap and abundant water power is found close to pulpwood stands, and extensive river systems can be used to transport pulpwood to the mills. Other important factors include the steady growth of population on the North American Continent, the increase in literacy, the rise of voluminous metropolitan dailies, the adoption of technical improvements in the printing and building trades and the growth of modern merchandising techniques. In recent years, extensive development in the field of non-paper uses for dissolving pulp, such as rayon and plastics, has contributed to the growth of the industry.

In the period 1946-52, the industry, with a capital investment of $600,000,000, tripled its value of production and increased its volume of output by 50 p.c. Newsprint output advanced 37 p.c., mechanical pulp 29 p.c., chemical pulp 45 p.c., paperboard 27 p.c., and wrapping paper 27 p.c. The significance of the industry in the post-war period is indicated by the fact that it ranked first in wages paid, first in new investment, first in exports as well as first in value of output. It produced one-quarter of the world's output of wood-pulp and supplied 30 p.c. of the world's total pulp exports. It provided more than one-half the world's newsprint and a significant amount of other grades of paper and paperboard.

In 1952 the output of newsprint continued to expand, registering a 3-p.c. increase over 1951. However, easing demand conditions for market pulp and paper products resulted in rather substantial cutbacks as compared with the previous year. Even in the newsprint sector some levelling in demand occurred in North America in 1952 with shipments to domestic and United States consumers being only slightly above 1951. On the other hand, shipments to overseas markets expanded by over 28 p.c.

Five of Canada's fifteen largest manufacturing industries are included in the foods and beverages group. The slaughtering and meat-packing industry ranked second in 1952 with a gross value of production of $864,000,000, butter and cheese eighth with production of $379,000,000, flour mills thirteenth with $274,000,000, miscellaneous food preparations fourteenth with $266,000,000 and bread and other bakery products fifteenth with $260,000,000. The level of activity in Canada's food-processing establishments exerts a major influence on over-all employment and income. The food industries have experienced a wide shift in the importance of various markets. Production for overseas trade received considerable impetus during World War I and continued active in the following period. By 1939, Canadian salmon, bacon, flour and canned fruits and vegetables were being shipped to Europe in large quantities and the United States also provided an attractive market for a great variety of processed foods. During World War II producers turned out bacon, canned meats, cheese and dried milk and eggs in record quantities to meet Allied requirements. However, in the post-war period United Kingdom contracts have been continued at progressively lower levels and fewer commodities have been involved with each succeeding year and surplus products have been absorbed by Canada's growing population and increased per capita consumption.

The non-ferrous metal smelting and refining industry, the third largest manufacturing industry in Canada, had a gross value of production of $837,000,000 in 1952. Canada is one of the world's leading producers of non-ferrous metals, standing first in the production of nickel, second in aluminum and zinc, and fourth in copper and lead. Canada has been the world's leading exporter of non-ferrous metals for over a decade. The most important of this country's base-metal ore-bodies were discovered before the turn of the century but their complexity prevented early exploitation. Unlike many important deposits elsewhere, which consist largely of oxides or of sulphides of a single metal, they were found to contain ores of two or more base metals intimately associated and frequently containing appreciable quantities of precious metals, such as gold, silver and platinum. Their development has been one of the most notable triumphs of Canadian skill and enterprise. During World War I and throughout the 1920's, large sums of money were spent on the discovery and improvement of smelting and refining techniques. Later, as the success of these processes was assured, plants were built that ranked among the greatest and most highly integrated of their kind in the world. Once in operation, these establishments were in a position to reap the economies of large-scale production. Cheap water power, numerous by-products and locations near the ore-bodies were other advantages which enabled Canadian firms to sell large tonnages of refined metal in the world's markets at competitive prices. Unfortunately, they were soon to be faced with the general decline in industrial demand for metals which characterized the early 1930's. High United States tariffs also restricted sales in that country. It was not until about 1935 that industrial recovery and the first stages of rearmament in Europe led to production again approaching capacity. During World War II many ore-bodies were "high graded", removing the best ore and losing the lower-grade deposits. After the War, production declined owing not only to a fall in demand but also because of a return to better conservational practices. Improved technology has permitted the treatment of rock which formerly would have been classified as waste. However, the past few years have witnessed a renewed defence demand and the output of base metals in Canada during 1952 reached a post-war peak. Although production of copper was down 4 p.c. as the result of a strike, output of all other major base metals was up from the previous year. Nickel production increased by 2 p.c., lead production by 7 p.c., zinc by 9 p.c. and aluminum by 12 p.c.

The transportation equipment group includes three of Canada's largest industries: motor-vehicles ranked fourth with a production of $767,000,000, railway rolling-stock ninth with $332,000,000 and motor-vehicle parts twelfth with $277,000,000. The establishment and rapid growth of the motor-vehicle industry in Canada was particularly influenced by early tariff policies and by the strong demand for North American type vehicles in many Commonwealth countries and the existence of trade preferences granted by some of these territories to Canada. Another characteristic of the industry has been American ability to supply relatively low-cost components and sub-assemblies, patent rights, technical and managerial skill, research facilities and large amounts of investment capital. During the post-war period, the Canadian motor-vehicle industry has tripled its capacity. In 1939 there was one passenger car for every 9·5 persons in the country; in 1952 there was one for every 6·3 persons. In the latter year the industry was particularly stimulated by the reduction, in April and May, of excise taxes and suspension of consumer credit regulations. Domestic sales expanded rapidly and, along with sizable export orders and defence contracts, kept the industry at peak levels of activity for the remainder of the year.

Canada's railway rolling-stock industry experienced periods of extraordinary activity during and immediately after the two World Wars. It also encountered several years of moderate prosperity in the 1920's and became one of the nation's most depressed industries a few years later. Generally speaking, the level of activity in this industry has been closely linked with the financial position of the Canadian railways. The facilities of locomotive and car-building companies, dependent almost entirely upon the railways' program of new investment in rolling stock, have been used in an intermittent fashion and prolonged plant shut-downs have not been uncommon. On the other hand, outlay on repair and maintenance has usually been necessary on a continuing basis and railway shops and parts suppliers have been less exposed to extreme fluctuations in production and employment. Exports of railway rolling-stock were relatively insignificant before 1944. In that year a program for the rehabilitation of European railways was undertaken and, since that time, contracts for France, Belgium, India, South Africa and Rhodesia, as well as countries in the Middle East and South America, have been completed.

The fifth largest manufacturing industry, petroleum products, had a gross value of output of $660,000,000 in 1952, and is of tremendous significance in terms of Canada's balance of payments and strategic importance to the defence of North America. Measured in either bulk or value terms, world production of crude oil is the most important commodity entering international trade. Canada's growing industrialization is reflected in the rising rate at which crude oil is used and per capita consumption is now the second highest in the world. There have been three definite phases in the use of oil. The first, which began soon after 1860, was based on kerosene but light petroleum fractions were soon accepted as a cheap and efficient substitute. Other fractions, which make up the rich and complex mixture of hydrocarbons in crude petroleum, ranging from explosively volatile wet gases to heavy oils, waxes and asphalts, were beyond the technology of the day to unravel and the capacity of the economy to absorb. World War I and the maturity of the internal-combustion engine marked the second phase. The price of gasoline rose sharply and drilling activity increased all over the world. By 1930, surplus oil production had become general once more and from then until World War II there was from 20 to 25 p.c. surplus capacity in all branches of the industry. With kerosene consumption declining and the gasoline phase becoming general, middle distillates and the heavier ends overhung the market and frequently were sold at distress prices. Phase three, which developed out of the Second World War, is now asserting itself. For the first time, most refineries have few surplus products. Nearly everything from a barrel of crude is being marketed, it now being possible to gear production closely to fluctuations in demand. Behind all this lies modern refinery equipment and techniques, which are being used to 'crack' heavy fractions down to lighter ones and, more important still, the domestic oil heater and the diesel engine. Middle distillate consumption has been increasing much more rapidly than that of gasoline in recent years and now serves to underwrite much of the growing demand for crude oil. Although the history of the Canadian crude oil industry dates back almost 100 years, production did not begin to reflect the amount of exploratory drilling done in the Western Provinces until 1936 when Turner Valley was definitely established as a major oil field. Scattered discoveries of little commercial importance had been made before that time and natural gas had been found in abundance. With the exception of the discovery of the heavy crude area at Lloydminster in 1944, no other outstanding developments took place until early 1947 when the Leduc field was discovered. Output had been falling off but in the few years since the Leduc field came into production the Canadian oil outlook has been transformed. In 1947, domestic sources supplied less than 10 p.c. of the nation's needs. Since then, production has greatly increased and existing wells are now capable of producing nearly 50 p.c. of domestic petroleum requirements.

In 1952 the sawmill-products industry produced almost $568,000,000 worth of planks and boards, shingles, railway ties and other sawmill products and thus ranked sixth among Canada's manufacturing industries. Since the early days of Canada, the growth of the lumber industry has reflected the expansion of the Canadian economy. During World War II, output was limited only by production facilities and the availability of manpower. Large quantities of lumber were used domestically for the construction of defence establishments and for new munitions factories in the first two years of the War. Later on, demand gradually increased for lumber to make boxes, barrels and crates required for the overseas shipment of munitions, food and supplies. Large volumes of lumber were also used in connection with shipbuilding and aircraft construction and for such essential purposes as mining, manufacture of railway rolling-stock and wartime housing. Besides fulfilling the domestic requirements, which took an increasing percentage of total production as the War proceeded, Canada maintained at high level its exports to the United Kingdom, to other Commonwealth countries and to the United States. By 1945, out of a total production of 4,500,000,000 board feet, 56 p.c. was used at home, 19 p.c. was exported to the United Kingdom and 21 p.c. to the United States. For most of the period since the end of the War, demand for sawmill products has continued to exceed the supply and lumber prices have more than doubled in the past few years.

With production at $504,000,000 in 1952, the primary iron and steel industry ranked seventh in Canadian manufacturing. After World War II the industry added greatly to its steel-making plant and by 1942 domestic output had reached 2,900,000 ingot tons annually. In recent years greater emphasis has been placed upon modernization and on adding rolling mill and other fabricating facilities in order to permit greater integration and more efficient operation of existing plants. As a result of recent outlays, Canada is now virtually self-sufficient in tin plate. Large-scale production of cold rolled strip, large-diameter oil and gas line pipe, special alloys and stainless steel is also being carried out in this country. Other items, such as rails, bars, rods, wire products and hot rolled plate and sheet in certain widths, are relatively important products of Canadian mills. Current imports tend to be confined to products not made in quantity in Canada, such as large items beyond the capacity of Canadian mills, Bessemer skelp for the production of pipe, special steel sheet material for large transmission towers and certain wire products, forgings and castings. The future development of the industry is linked with the tremendous progress being made in iron-ore production.

The rubber industry ranked tenth in 1952 with a gross output of $287,000,000. This industry forms an adjunct of considerable importance to the cotton yarn and cloth and synthetic textiles industries which supply it with fabrics, yarns, etc., used in manufacturing such items as tires, hose and belting. The importance of the industry lies in the fact that Canada ranks among the leading countries of the world as a manufacturer of rubber goods and also that the industry makes a significant contribution to Canada's export trade. Tire sales in 1952 were 9 p.c. higher than in 1951 but sales of waterproof and canvas footwear were down 2 p.c. and there was a drop in other principal standard production items such as belting, hose and packing. Consumption of rubber in 1952 involved 41·6 p.c. synthetic rubber, 41·5 p.c. natural rubber and 16·9 p.c. reclaim.

The men's factory clothing industry ranked eleventh with output at $277,000,000 in 1952. This was the only textile industry to rank currently within the major fifteen compared with three in 1949. Recovery in the clothing and leather-products industries from the slack conditions prevailing during the latter part of 1951 began early in 1952. The initial cause for the upturn in activity was caused by depleted inventories at both the retail and factory levels but, once under way, recovery was given added impetus by increased retail sales from April onwards. At the same time there were a number of underlying negative factors qualifying the industry's recovery. Credit played a growing role in the increase of retail sales. Despite this increase, clothing prices fell slightly as compared with 1951 and the volume of imports assumed a larger percentage of domestic disappearance at the end of the year.

PART II.—ANALYSES OF MANUFACTURING STATISTICS

Section 1.—Growth of Manufacturing

This Section gives a summary of the growth of manufacturing in general, as shown by comparable principal statistics, i.e., establishments, employees, salaries and wages paid, cost of materials and value of products. Also, it includes information on the consumption of manufactured products as well as a treatment of value and volume data.

Subsection 1.—Historical Statistics of Manufacturing

It is impossible to give absolutely comparable statistics of manufacturing over a long period of years. From 1870 to 1915 statistics were collected only in connection with decennial or quinquennial censuses and there was inevitably some variation in the information collected. The annual Census of Manufactures was instituted in 1917 and, while numerous changes have been made since then in the information collected and the treatment of the data, an effort has been made to carry all major revisions, as far as possible, back to 1917, so that the figures for the period since then are on a reasonably comparable basis.

Beginning in 1952, the Bureau of Statistics changed its policy with regard to the collection of statistics on the production of manufactured goods. Firms in several industries where year-end inventory changes were known to be insignificant were requested to report value of shipments f.o.b. plant instead of gross value of products. Under the "value of products" concept, establishments were asked to report the factory selling value of the products made whether sold or not, the unsold portion being assigned the average selling value of similar articles sold during the year. Under the "value of shipments" concept, establishments are required to report their sales during the year regardless of when the products were made, an item usually readily available from the firms' records. The changeover was made to provide increased ease in reporting for the majority of plants and at the same time to produce more reliable and useful statistics.

1.—Summary Statistics of Manufactures, 1917-52

NOTE.—Statistics of manufacturing from 1870 have been published, but between that year and 1917 figures are not on a comparable basis to the series given below. Statistics for significant years will be found in the 1943-44 Year Book, p. 363. Statistics of the non-ferrous metal-smelting industries were included in manufactures in 1925 for the first time.

Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products
	No.	No.	$	$	$	$
1917	21,845	606,523	497,801,844	1,539,678,811	1,281,131,980	2,820,810,791
1918	21,777	602,179	567,991,171	1,827,631,548	1,399,794,849	3,227,426,397
1919	22,083	594,066	601,715,668	1,779,056,765	1,442,400,638	3,221,457,403
1920	22,532	598,893	717,493,876	2,085,271,649	1,621,273,348	3,706,544,997
1921	20,848	438,555	497,399,761	1,365,292,885	1,123,694,263	2,488,987,148
1922	21,016	456,256	489,397,230	1,272,651,585	1,103,266,106	2,375,917,691
1923	21,080	506,203	549,529,631	1,456,595,367	1,206,332,107	2,662,927,474
1924	20,709	487,610	534,467,675	1,422,573,946	1,075,458,459	2,570,561,931
1925[2]	20,981	522,924	569,944,442	1,571,788,252	1,167,936,726	2,816,864,958
1926[2]	21,301	559,161	625,682,242	1,712,519,991	1,305,168,549	3,100,604,637
1927[2]	21,501	595,052	662,705,332	1,741,128,711	1,427,649,292	3,257,214,876
1928[2]	21,973	631,429	721,471,634	1,894,027,188	1,597,887,676	3,582,345,302
1929[2]	22,216	666,531	777,291,217	2,029,670,813	1,755,386,937	3,883,446,116
1930[2]	22,618	614,696	697,555,378	1,664,787,763	1,522,737,125	3,280,236,603
1931	23,083	528,640	587,566,990	1,221,911,982	1,252,017,248	2,555,126,448
1932	23,102	468,833	473,601,716	954,381,097	955,960,724	1,980,417,543
1933	23,780	468,658	436,247,824	967,788,928	919,671,181	1,954,075,785
1934	24,209	519,812	503,851,055	1,229,513,621	1,087,301,742	2,393,692,729
1935	24,034	556,664	559,467,777	1,419,146,217	1,153,485,104	2,653,911,209
1936	24,202	594,359	612,071,434	1,624,213,996	1,289,592,672	3,002,403,814
1937	24,834	660,451	721,727,037	2,006,926,787	1,508,924,867	3,625,459,500
1938	25,200	642,016	705,668,589	1,807,478,028	1,428,286,778	3,337,681,366
1939	24,805	658,114	737,811,153	1,836,159,375	1,531,051,901	3,474,783,528
1940	25,513	762,244	920,872,865	2,449,721,903	1,942,471,238	4,529,173,316
1941	26,293	961,178	1,264,862,643	3,296,547,019	2,605,119,788	6,076,308,124
1942	27,862	1,152,091	1,682,804,842	4,037,102,725	3,309,973,758	7,553,794,972
1943	27,652	1,241,068	1,987,292,384	4,690,493,083	3,816,413,541	8,732,860,999
1944	28,483	1,222,882	2,029,621,370	4,832,333,356	4,015,776,010	9,073,692,519
1945	29,050	1,119,372	1,845,773,449	4,473,668,847	3,564,315,899	8,250,368,866
1946	31,249	1,058,156	1,740,687,254	4,358,234,766	3,467,004,980	8,035,692,471
1947	32,734	1,131,750	2,085,925,966	5,534,280,019	4,292,055,802	10,081,026,580
1948	33,420	1,155,721	2,409,368,190	6,632,881,628	4,938,786,981	11,875,169,685
1949[3]	35,792	1,171,207	2,591,890,657	6,843,231,064	5,330,566,434	12,479,593,300
1950	35,942	1,183,297	2,771,267,435	7,538,534,532	5,942,058,229	13,817,526,381
1951	37,021	1,258,375	3,276,280,917	9,074,526,353	6,940,946,783	16,392,187,132
1952	37,929	1,288,382	3,637,620,160	9,146,172,494	7,443,533,199	16,982,687,035[4]

[1] For 1924 and subsequent years the net value of production is computed by subtracting the cost of fuel and electricity and the cost of materials from the gross value. Figures prior to 1924 are not comparable because statistics for cost of electricity are not available. [2] A change in the method of computing the number of wage-earners in the years 1925 to 1930, inclusive, increased the number somewhat over that which the method otherwise used would have given. In 1931, however, the method in force prior to 1925 was re-adopted. [3] Newfoundland included from 1949. [4] In 1952, gross value of products was replaced by value of factory shipments, *see* text immediately preceding this table.

2.—Summary Statistics of Manufactures, by Province, Significant Years, 1917-52

Province and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products[2]
	No.	No.	$	$	$	$
Newfoundland—						
1949	793	6,934	15,486,336	31,228,173	32,918,776	67,264,282
1951	822	9,622	22,681,246	43,117,299	53,690,187	100,642,613
1952	948	10,303	25,233,851	45,477,620	56,109,014	105,459,684[2]
Prince Edward Island—						
1917	411	1,556	663,251	3,087,621	1,750,135	4,837,756
1920	370	1,287	855,210	4,164,223	2,135,857	6,300,080
1929[3]	263	2,074	727,286	2,862,725	1,466,446	4,408,608
1933	249	991	529,684	1,590,834	1,126,826	2,775,787
1939	222	1,088	617,945	2,239,117	1,243,979	3,543,681
1944	241	1,786	1,694,763	6,993,510	3,570,835	10,713,644
1946	246	1,755	1,651,469	7,582,046	3,469,435	11,200,310
1949	251	1,747	2,133,555	13,537,144	4,338,320	18,123,200
1951	237	1,735	2,459,553	17,177,748	5,046,797	22,523,439
1952	224	1,795	2,805,622	15,786,399	5,957,097	22,069,671[2]
Nova Scotia—						
1917	1,337	25,252	18,838,051	102,415,215	57,565,703	159,980,918
1920	1,345	23,425	25,625,089	85,724,785	61,371,243	147,096,028
1929[3]	1,094	19,986	16,905,885	50,725,562	35,676,421	89,787,548
1933	1,277	12,211	9,604,680	25,354,319	19,988,257	47,912,432
1939	1,083	17,627	16,651,685	43,332,195	35,885,563	83,139,572
1944	1,281	37,812	59,940,411	103,463,123	93,376,638	204,421,664
1946	1,397	29,724	43,060,259	100,354,480	71,738,873	178,793,420
1949	1,480	29,311	54,686,577	135,841,899	102,294,298	247,592,389
1951	1,474	30,512	63,975,754	172,115,336	119,486,630	303,619,234
1952	1,533	33,371	75,245,387	183,141,366	130,715,000	326,839,747[2]
New Brunswick—						
1917	943	19,710	12,893,014	32,380,621	27,027,725	59,408,346
1920	901	19,007	19,266,821	60,812,641	45,803,164	106,615,805
1929[3]	803	17,952	15,127,716	39,800,366	26,640,786	68,145,012
1933	747	11,336	9,308,100	20,442,421	18,166,713	41,345,622
1939	803	14,501	13,659,162	35,617,614	27,041,195	66,058,151
1944	937	23,164	32,345,080	83,993,599	62,258,478	152,106,577
1946	993	22,732	33,151,919	96,389,299	67,783,377	170,753,741
1949	1,060	23,446	44,219,819	131,804,253	91,187,375	231,506,191
1951	1,084	24,505	53,546,882	176,358,864	120,594,955	307,173,504
1952	1,077	24,251	55,978,462	164,760,874	117,837,471	293,759,782[2]
Quebec—						
1917	7,032	188,043	141,008,616	385,212,984	380,882,409	766,095,393
1920	7,530	183,748	202,516,550	553,558,520	499,643,217	1,053,201,737
1929[3]	6,948	206,580	225,226,808	537,270,055	537,796,395	1,108,592,775
1933	7,856	157,481	134,696,386	292,560,568	288,504,782	604,496,078
1939	8,373	220,321	223,757,767	536,828,039	470,385,279	1,045,757,585
1944	9,656	424,115	668,156,053	1,494,253,053	1,350,519,134	2,929,685,183
1946	10,818	357,276	565,986,105	1,297,009,099	1,125,991,848	2,497,971,521
1949	11,579	390,275	809,579,270	2,027,793,643	1,651,629,668	3,788,497,123
1951	11,861	417,182	1,005,601,680	2,696,638,646	2,083,933,751	4,916,157,419
1952	12,024	429,698	1,125,944,703	2,745,618,113	2,288,643,279	5,176,234,825[2]
Ontario—						
1917	9,061	299,389	258,393,065	794,556,502	662,174,261	1,456,730,763
1920	9,113	295,674	362,941,317	1,071,843,374	792,267,562	1,864,110,936
1929[3]	9,348	328,533	406,622,627	1,056,530,202	916,971,816	2,020,492,433
1933	9,542	224,816	220,530,088	464,544,563	465,103,842	958,776,858
1939	9,824	318,871	378,376,209	907,011,461	791,428,569	1,745,674,707
1944	10,731	564,392	975,038,060	2,310,347,858	1,930,043,913	4,339,797,784
1946	11,424	498,120	845,216,547	2,001,900,592	1,659,284,622	3,754,523,701
1949	12,951	557,190	1,305,544,434	3,256,454,918	2,708,554,013	6,103,804,834
1951	13,025	599,433	1,669,386,982	4,334,394,367	3,569,400,065	8,074,731,217
1952	13,172	609,696	1,844,186,405	4,387,431,403	3,811,106,576	8,372,173,626[2]

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[1] *See* footnote 1, Table **1**.

[2] In 1952, gross value of products was replaced by value of factory shipments; *see* text on pp. 633-634.

[3] *See* footnote 2, Table **1**.

2.—Summary Statistics of Manufactures, by Province, Significant Years, 1917-52—concluded

Province or Territory and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products[2]
	No.	No.	$	$	$	$
Manitoba—						
1917	732	18,939	16,513,423	69,715,149	42,280,801	111,995,950
1920	747	23,728	32,372,081	92,729,271	62,776,912	155,506,183
1929[3]	861	24,012	31,224,596	87,832,324	63,925,015	155,266,294
1933	1,010	18,871	18,687,430	44,579,998	37,390,275	83,934,777
1939	1,087	23,910	28,444,798	82,408,293	48,810,544	134,293,595
1944	1,290	40,937	62,758,081	226,234,925	120,339,926	352,334,594
1946	1,357	38,367	61,018,345	223,096,935	122,780,805	351,887,099
1949	1,520	41,956	86,088,380	299,101,498	167,335,495	474,681,912
1951	1,512	41,459	100,170,966	349,203,612	192,848,667	551,346,046
1952	1,531	43,365	112,147,572	347,664,650	216,814,306	574,037,212[2]
Saskatchewan—						
1917	560	6,230	5,403,332	22,040,674	13,894,179	35,934,853
1920	554	6,709	9,571,175	34,894,105	22,610,861	57,504,966
1929[3]	594	7,025	9,105,597	51,003,566	23,002,952	75,368,605
1933	673	4,782	4,848,763	19,124,030	11,478,634	31,559,387
1939	737	6,475	7,346,127	38,782,135	20,283,273	60,650,589
1944	1,054	12,361	17,703,103	131,215,017	40,833,333	175,349,234
1946	955	11,957	17,956,317	126,595,761	38,459,630	168,356,619
1949	962	10,841	22,273,942	164,349,341	47,356,949	215,742,708
1951	973	11,023	26,290,294	185,151,455	61,088,606	250,813,026
1952	1,022	11,307	29,489,862	172,388,119	80,934,157	258,931,776[2]
Alberta—						
1917	636	9,461	8,662,417	42,632,212	23,883,673	66,515,885
1920	666	10,955	15,210,628	56,139,646	29,812,891	85,952,537
1929[3]	736	12,216	14,585,734	62,500,175	36,824,969	100,966,196
1933	874	9,753	9,573,468	29,425,975	18,876,929	49,395,514
1939	961	12,712	14,977,700	53,151,149	32,618,153	87,474,080
1944	1,165	22,186	33,227,729	172,082,537	77,415,753	252,949,894
1946	1,315	22,649	34,939,088	169,425,176	83,735,011	257,031,867
1949	1,685	26,425	55,115,554	251,364,059	114,681,296	371,995,120
1951	2,118	29,105	69,135,587	309,430,618	141,649,574	458,281,384
1952	2,150	31,765	82,527,194	331,817,141	178,221,013	518,410,811[2]
British Columbia—						
1917[4]	1,133	37,943	35,426,675	87,637,833	71,673,094	159,310,927
1920[4]	1,306	34,360	49,135,005	125,405,084	104,851,641	230,256,725
1929[3],[4]	1,569	48,153	57,764,968	141,145,838	113,082,137	260,418,645
1933[4]	1,552	28,417	28,469,225	70,166,220	59,034,923	133,879,330
1939	1,710	42,554	53,881,994	136,655,872	103,263,292	247,948,600
1944	2,116	96,062	178,639,118	303,560,016	337,137,197	655,844,689
1946	2,731	75,484	137,506,645	335,708,533	293,352,652	644,527,898
1949	3,493	82,934	196,403,722	531,112,329	409,665,348	959,008,088
1951	3,897	93,647	262,626,283	789,840,417	592,448,565	1,404,880,341
1952	4,225	92,667	283,530,976	751,011,248	556,172,312	1,332,481,862[2]
Yukon and N.W.T.—						
1939	5	55	97,766	138,500	92,054	242,968
1944	12	67	118,972	189,718	280,803	489,256
1946	13	92	200,560	172,845	408,727	646,295
1949	18	148	359,068	643,807	604,896	1,377,453
1951	18	152	405,690	1,097,991	758,986	2,018,909
1952	23	164	530,126	1,075,561	1,022,974	2,288,039[2]

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[1] *See* footnote 1, Table **1**.

[2] In 1952, gross value of products was replaced by value of factory shipments; *see* text on pp. 633-634.

[3] *See* footnote 2, Table **1**.

[4] Includes Yukon Territory.

In order to retain some continuity with the past, Table **3** continues the historical series on the chief component material classification basis. Similar statistics under the Standard Classification groups (*see* pp. 644-655), worked back to 1945, are given in Table **10**, pp. 636-637.

3.—Summary Statistics of Manufactures, by Industrial Group, Significant Years, 1917-52

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products[2]
	No.	No.	$	$	$	$
Vegetable Products—						
1917	4,151	62,777	45,915,557	367,214,061	183,782,501	550,996,562
1920	4,549	74,241	77,750,189	536,828,044	239,328,371	776,156,415
1929[3]	5,350	91,032	95,853,121	431,595,751	341,688,938	783,706,883
1933	5,916	75,416	68,535,349	226,879,373	196,820,952	432,315,617
1939	5,872	99,447	104,248,785	356,726,153	292,129,840	659,624,014
1944	5,941	130,679	183,943,948	763,606,750	485,551,491	1,270,518,297
1946	5,916	137,170	206,893,681	871,436,061	575,963,454	1,469,914,130
1949	5,903	143,032	285,536,723	1,236,409,496	754,329,727	2,020,565,833
1951	5,862	144,762	339,272,100	1,485,063,324	926,401,068	2,445,848,786
1952	5,826	144,572	365,783,661	1,477,824,823	1,006,127,373	2,519,179,224[2]
Animal Products—						
1917	5,486	46,994	35,753,133	320,302,039	124,103,990	444,406,029
1920	4,823	48,687	54,291,606	400,496,354	152,995,130	553,491,484
1929[3]	4,490	67,670	62,081,423	345,351,882	127,929,857	477,761,855
1933	4,496	53,111	46,453,188	179,429,948	87,629,444	271,068,210
1939	4,362	69,358	68,231,871	333,647,306	122,821,410	461,983,262
1944	4,388	94,195	129,215,389	835,586,247	246,064,720	1,092,015,647
1946	4,528	102,844	151,517,837	849,242,804	271,279,430	1,132,233,759
1949	4,231	102,657	197,189,519	1,158,872,220	369,545,771	1,543,930,584
1951	4,030	100,487	222,271,019	1,425,565,514	402,417,994	1,846,134,158
1952	3,912	102,038	242,380,359	1,325,004,126	457,008,034	1,801,102,780[2]
Textile and Textile Products—						
1917	1,067	76,978	47,764,436	131,225,032	109,904,530	241,129,562
1920	1,304	87,730	84,433,609	256,233,300	173,741,035	429,974,335
1929[3]	1,534	103,881	94,969,433	217,954,088	180,469,064	403,205,809
1933	1,740	95,707	72,813,424	143,184,861	131,065,992	279,475,267
1939	1,930	121,022	107,117,035	203,618,197	181,927,898	392,657,759
1944	2,481	153,122	195,805,681	419,988,642	351,186,488	781,771,688
1946	3,082	164,737	228,018,323	459,664,221	418,263,665	888,658,943
1949	3,234	186,328	342,930,642	669,108,586	606,402,697	1,290,314,474
1951	3,343	190,054	389,843,607	861,474,177	681,616,663	1,559,977,021
1952	3,346	183,158	400,480,854	819,392,316	688,806,368	1,524,985,439[2]
Wood and Paper Products—						
1917	7,263	152,277	113,359,997	148,277,935	245,372,487	393,650,422
1920	7,881	144,391	172,368,578	309,813,724	417,256,115	727,069,839
1929[3]	7,392	164,572	192,088,948	313,797,201	381,485,477	724,972,308
1933	7,891	105,080	102,218,652	134,663,641	184,233,540	341,336,701
1939	8,538	144,782	165,287,455	246,292,820	303,662,441	579,892,183
1944	10,452	189,674	284,436,559	497,656,158	550,826,986	1,093,725,822
1946	11,994	224,121	366,049,562	679,343,485	749,055,011	1,484,436,122
1949	15,866	262,835	579,896,808	1,061,229,176	1,184,539,519	2,325,304,849
1951	16,817	281,204	735,283,683	1,453,475,873	1,660,280,363	3,209,391,543
1952	17,403	280,337	783,737,813	1,479,484,588	1,607,001,792	3,184,797,667[2]
Iron and Its Products—						
1917	1,495	161,745	161,875,424	378,193,116	371,792,489	749,985,605
1920	1,789	164,087	231,595,911	377,499,134	411,875,057	789,374,191
1929[3]	1,224	142,772	203,740,658	405,818,468	367,465,582	790,726,338
1933	1,334	73,348	72,296,179	98,793,191	109,198,169	216,828,992
1939	1,394	121,041	158,559,728	262,292,781	275,774,796	553,468,880
1944	2,192	411,944	818,452,454	1,104,083,922	1,390,703,087	2,540,992,974
1946	2,358	249,279	475,812,983	635,344,199	735,459,371	1,405,542,865
1949	2,658	265,474	678,924,105	1,197,956,715	1,219,303,992	2,468,376,349
1951	2,758	303,497	910,549,175	1,724,318,073	1,641,346,745	3,432,209,864
1952	2,973	333,132	1,084,755,540	1,951,542,870	1,902,423,464	3,922,647,073[2]

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[1] *See* footnote 1, Table **1.** [2] *See* footnote 4, Table **1.** [3] *See* footnote 2, Table **1.**

3.—Summary Statistics of Manufactures, by Industrial Group, Significant Years, 1917-52—concluded

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products[1]	Gross Value of Products[2]
	No.	No.	$	$	$	$
Non-ferrous Metal Products—						
1917	296	18,220	15,898,890	46,445,469	41,039,351	87,484,820
1920	324	23,162	27,895,343	48,434,120	52,847,178	101,281,298
1929[3]	408	39,867	54,501,806	124,900,632	150,415,215	283,545,666
1933	478	25,273	28,099,026	71,990,608	88,427,984	164,765,604
1939	526	44,563	59,684,858	242,063,177	155,808,806	416,060,459
1944	635	104,314	182,909,292	549,317,062	399,498,519	992,345,975
1946	740	84,853	150,366,178	413,022,247	278,461,262	719,191,106
1949	897	100,614	251,869,627	749,678,627	558,467,028	1,353,329,383
1951	909	117,740	345,482,742	1,113,974,070	760,219,708	1,929,608,127
1952	953	120,138	384,610,020	1,058,309,597	810,854,261	1,930,991,789[2]
Non-metallic Mineral Products—						
1917	1,075	20,795	18,224,724	36,994,392	58,092,396	95,086,788
1920	846	25,500	32,351,764	69,856,558	80,205,472	150,062,030
1929[3]	843	29,257	38,958,390	112,573,103	99,065,847	229,774,300
1933	770	16,975	19,282,401	69,077,701	52,817,078	131,325,706
1939	809	23,026	30,067,934	107,979,292	85,511,631	208,166,781
1944	748	31,590	56,130,338	234,714,319	152,525,053	416,268,879
1946	910	36,493	63,848,640	240,485,869	173,638,196	446,484,682
1949	1,097	42,691	104,377,854	469,437,193	261,691,705	780,188,518
1951	1,124	47,120	138,026,862	606,994,396	375,221,419	1,044,425,433
1952	1,158	48,327	156,392,092	634,846,809	429,518,608	1,130,487,677[2]
Chemicals and Allied Products—						
1917	539	56,153	51,505,484	99,068,092	131,381,995	230,450,087
1920	464	17,653	22,193,421	62,644,608	65,183,212	127,827,820
1929[3]	554	16,694	22,639,449	55,184,337	78,785,911	138,545,221
1933	696	15,397	18,738,629	34,271,854	55,394,284	92,820,761
1939	808	22,595	31,567,558	65,230,839	89,046,832	159,536,984
1944	981	81,822	137,422,977	360,412,749	355,260,598	733,569,232
1946	1,017	37,278	66,538,532	159,308,350	203,639,442	376,288,264
1949	1,022	40,499	98,568,559	238,377,149	279,038,860	536,156,674
1951	1,024	44,913	128,993,172	318,228,683	373,176,901	716,287,268
1952	1,062	46,971	145,647,388	313,340,224	407,215,284	744,630,244[2]
Miscellaneous Industries—						
1917	473	10,584	7,504,199	11,958,675	15,662,241	27,620,916
1920	552	13,442	14,613,455	23,465,807	27,841,778	51,307,585
1929[3]	421	10,786	12,457,989	22,495,351	28,081,046	51,207,736
1933	459	8,351	7,810,976	9,497,751	14,083,738	24,138,927
1939	566	12,280	13,045,929	18,308,810	24,368,247	43,393,206
1944	665	25,542	41,304,732	66,967,507	84,159,068	152,484,005
1946	704	21,381	31,641,518	50,387,530	61,245,149	112,942,600
1949	884	27,077	52,596,820	62,161,902	97,247,135	161,426,636
1951	1,154	28,598	66,558,557	85,432,243	120,265,922	208,304,932
1952	1,296	29,709	73.832,433	86,427,141	134,578,015	223,865,142[2]

[1] *See* footnote 1, Table **1**. [2] *See* footnote 4, Table **1**. [3] *See* footnote 2, Table **1**.

The figures in Table 4 show the trends of development in Canadian manufacturing industries since 1917. Interesting comparisons may be made by studying the average figures given.

4.—Significant Statistics of Manufactures for Certain Years, 1917-52

Item		1917	1920	1929[1]	1933	1939
Establishments	No.	21,845	22,532	22,216	23,780	24,805
Totals, employees	"	606,523	598,893	666,531	468,658	658,114
Averages, per establishment	"	27·8	26·6	30·0	19·7	26·5
Totals, salaries and wages	$	497,801,844	717,493,876	777,291,217	436,247,824	737,811,153
Averages, per establishment	$	22,788	31,843	34,988	18,345	29,744
Averages, per employee	$	821	1,198	1,166	931	1,121
Employees on salaries	No.	64,918	78,334	88,841	86,636	124,772
Averages, per establishment	"	3·0	3·5	4·0	3·6	5·0
Salaries	$	85,353,667	141,837,361	175,553,710	139,317,946	217,839,334
Averages, per salaried employee	$	1,315	1,811	1,976	1,608	1,746
Employees on wages	No.	541,605	520,559	577,690	382,022	533,342
Averages, per establishment	"	24·8	23·1	26·0	16·1	21·5
Wages	$	412,448,177	575,656,515	601,737,507	296,929,878	519,971,819
Averages, per wage-earner	$	762	1,106	1,042	777	975
Cost of materials	$	1,539,678,811	2,085,271,649	2,029,670,813	967,788,928	1,836,159,375
Averages, per establishment	$	70,482	92,547	91,361	40,698	74,024
Averages, per employee	$	2,539	3,482	3,045	2,065	2,790
Values added in manufacture[2]	$	1,281,131,980	1,621,273,348	1,755,386,937	919,671,181	1,531,051,901
Averages, per establishment[2]	$	58,646	71,954	79,015	38,674	61,724
Averages, per employee[2]	$	2,112	2,707	2,634	1,962	2,326
Gross value of products	$	2,820,810,791	3,706,544,997	3,883,446,116	1,954,075,785	3,474,783,528
Averages, per establishment	$	129,128	164,501	174,804	82,173	140,084
Averages, per employee	$	4,651	6,189	5,286	4,170	5,280
		1944	1946	1949	1951	1952
Establishments	No.	28,483	31,249	35,792	37,021	37,929
Totals, employees	"	1,222,882	1,058,156	1,171,207	1,258,375	1,288,382
Averages, per establishment	"	42·9	33·9	32·7	34·0	34·0
Totals, salaries and wages	$	2,029,621,370	1,740,687,254	2,591,890,657	3,276,280,917	3,637,620,160
Averages, per establishment	$	71,257	55,704	72,415	88,498	95,906
Averages, per employee	$	1,660	1,645	2,213	2,604	2,823
Employees on salaries	No.	192,558	181,006	221,551	247,787	263,027
Averages, per establishment	"	6·8	5·8	6·2	6·7	6·9
Salaries	$	418,065,594	410,875,776	628,427,937	816,714,604	923,905,251
Averages, per salaried employee	$	2,171	2,270	2,836	3,296	3,513
Employees on wages	No.	1,030,324	877,150	949,656	1,010,588	1,025,355
Averages, per establishment	"	36·2	28·1	26·5	27·3	27·0
Wages	$	1,611,555,776	1,329,811,478	1,963,462,720	2,459,566,313	2,713,714,909
Averages, per wage-earner	$	1,564	1,516	2,068	2,434	2,647
Cost of materials	$	4,832,333,356	4,358,234,766	6,843,231,064	9,074,526,353	9,146,172,494
Averages, per establishment	$	169,657	139,468	191,194	245,118	241,139
Averages, per employee	$	3,952	4,119	5,843	7,211	7,099
Values added in manufacture[2]	$	4,015,776,010	3,467,004,980	5,330,566,434	6,940,946,783	7,443,533,199
Averages, per establishment[2]	$	140,989	110,948	148,932	187,487	196,249
Averages, per employee[2]	$	3,284	3,276	4,551	5,516	5,777
Gross value of products	$	9,073,692,519	8,035,692,471	12,479,593,300	16,392,187,132	16,982,687,035[3]
Averages, per establishment	$	318,565	257,150	348,670	442,781	447,749[3]
Averages, per employee	$	7,420	7,594	10,655	13,026	13,181[3]

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[1] The method of computing the number of wage-earners in 1925-30, inclusive, increased the number somewhat over that which otherwise would have been given. There was, therefore, a proportionate reduction in the averages for 1925-30 per employee and wage-earner. In 1931, the method in force prior to 1925 was re-adopted. [2] Net values of products; *see* footnote 1, Table 1, p. 634. [3] In 1952, gross value of products was replaced by value of factory shipments; *see* text on pp. 633-634.

Consumption of Manufactured Products.—The value of all manufactured products made available for consumption in 1952 was $17,215,524,423, a figure obtained by adding to the value of manufactured products the value of the imports of manufactured and partly manufactured goods and deducting the value of exports. More accurate statistics could be presented were it possible to exclude the duplications involved when the products of one manufacturing establishment become the material worked upon in another. Iron, vegetable, wood and paper, animal and textile products were, in that order, the leading groups in the value of finished products made available for consumption in 1952. Animal, wood and paper, and non-ferrous metal products were also manufactured in greater quantities than required for home consumption, providing export balances in these groups. Canada imports large quantities of iron and steel, textiles, chemicals and non-metallic mineral products despite large home production. Recent expansion of the iron and steel, chemical and non-ferrous metal industries will enable Canada to meet more requirements for home consumption and to export greater quantities in the future.

5.—Consumption of Manufactured Products, Significant Years, 1929-52, and by Industrial Groups, 1951 and 1952

Year and Industrial Group	Gross Value of Products Manufactured[2]	Manufactured and Partly Manufactured Goods[1]		Value of Manufactured Products Available for Consumption
		Value of Net Imports	Value of Domestic Exports	
	$	$	$	$
1929	3,883,446,116	939,130,201	686,876,071	4,135,700,246
1933	1,954,075,785	298,068,344	365,232,113	1,886,912,016
1939	3,474,783,528	542,364,930	646,853,938	3,370,294,520
1944	9,073,692,519	1,302,413,996	2,668,575,781	7,707,530,734
1946	8,035,692,471	1,390,123,100	1,701,677,026	7,724,138,545
1949	12,479,593,300	2,043,583,929	2,017,055,615	12,506,121,614
1950	13,817,526,380	2,289,162,070	2,239,733,915	13,866,954,535
Industrial Group, 1951[3]				
Vegetable products	2,445,848,786	263,617,019	244,721,869	2,464,743,936
Animal products	1,846,134,158	70,126,024	101,562,405	1,814,697,777
Textile and textile products	1,559,977,021	303,558,270	34,935,831	1,828,599,460
Wood and paper products	3,209,391,543	128,972,748	1,316,442,025	2,021,922,266
Iron and its products	3,432,209,864	1,291,364,316	323,702,566	4,399,871,614
Non-ferrous metal products	1,929,608,127	244,526,262	457,569,880	1,716,564,509
Non-metallic mineral products	1,044,425,433	251,828,723	85,510,539	1,210,743,617
Chemicals and allied products	716,287,268	189,719,193	131,689,729	774,316,732
Miscellaneous industries	208,304,932	290,997,274	52,956,412	446,345,794
Totals, 1951	**16,392,187,132**	**3,034,709,829**	**2,749,091,256**	**16,677,805,705**
Industrial Group, 1952[3]				
Vegetable products	2,519,179,224	238,550,554	235,150,632	2,522,579,146
Animal products	1,801,102,780	46,431,555	89,096,924	1,758,437,411
Textile and textile products	1,524,985,439	250,207,749	26,088,173	1,749,105,015
Wood and paper products	3,184,797,667	128,533,506	1,271,578,274	2,041,752,899
Iron and its products	3,922,647,073	1,359,518,854	384,612,567	4,897,553,360
Non-ferrous metal products	1,930,991,789	245,819,343	571,140,444	1,605,670,688
Non-metallic mineral products	1,130,487,677	249,979,373	96,045,997	1,284,421,053
Chemicals and allied products	744,630,244	185,943,668	124,565,264	806,008,648
Miscellaneous industries	223,865,142	420,396,731	94,265,670	549,996,203
Totals, 1952	**16,982,687,035**[2]	**3,125,381,333**	**2,892,543,945**	**17,215,524,423**

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[1] Figures for the years 1929 and 1933 are for the fiscal years ended Mar. 31 of the following years; for 1939–52 they are for the calendar year. Net imports are total imports less foreign products re-exported.
[2] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633f.
[3] Consumption figures for the major standard industrial classification groups (*see* p. 644) cannot be calculated as statistics of imports and exports are still compiled on the component material classification basis.

Subsection 2.—Value and Volume of Manufacturing Production

Value of Manufacturing Production.—In the interpretation of manufacturing values over a number of years, variations in the level of prices must be borne in mind. In recent years, owing to violent changes in prices, unadjusted value series, used in isolation, have become increasingly inadequate as indicators of economic trends. Of necessity, interest has shifted to measures of volume. The index number of wholesale prices (based on 1935-39 = 100) stood at 148·9 in 1917, 203·2 in 1920, 124·6 in 1929, 87·4 in 1933, 99·2 in 1939, 138·9 in 1946 and 226·0 in 1952. Index numbers of the prices of fully or chiefly manufactured goods on the same base were: 150·9 in 1917, 208·2 in 1920, 123·7 in 1929, 93·3 in 1933, 101·9 in 1939, 138·0 in 1946 and 230·7 in 1952.

Volume of Manufacturing Production.—Since real income is ultimately measured in goods and services, the growth of the volume of manufacturing production, as distinguished from its value, becomes a matter of great significance. The important thing to know is whether consumers are getting more goods and services and not whether they are expending more dollars and cents. The field of industrial production, because of its dominating position in the national economy, has attracted increasing attention. This, in turn, has resulted in the need for more accurate measurements of physical output.

During the past few years, the Dominion Bureau of Statistics has been engaged in the reconstruction of the index of industrial production* which was first published in 1926 and later subjected to several major revisions. The latest reconstruction was made possible by the availability of a great deal of basic data. Annual statistics valuable for this project have been collected by the Bureau from the end of World War I to the present and the scope of the monthly information has been greatly expanded. Applying methods developed through the experience of the past quarter-century, it has been possible to compute an index with a fair measure of accuracy from 1935 to the present.

The manufacturing sector is divided, at the major group level, into durable manufactures and non-durable manufactures, for the reason that the movement of durable goods normally varies from that of non-durables. There tends to be greater fluctuation in durables from prosperity to depression, the demand for non-durables being more constant.

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* A description of the methods used in constructing the index and a description of its scope is given in DBS Reference Paper No. 34, *Revised Index of Industrial Production, 1935-1951.*

6.—Index of the Total Volume of Manufacturing Production, classified on the Basis of Durable and Non-durable Goods, 1935-52

(1935–39 = 100)

Year	Non-durable Manufactures	Durable Manufactures	All Manufactures	Year	Non-durable Manufactures	Durable Manufactures	All Manufactures
1935.........	89·0	82·7	86·5	1944.........	179·8	340·1	242·3
1936.........	97·1	93·1	95·5	1945.........	176·3	262·1	209·8
1937.........	106·7	113·2	109·3	1946.........	180·2	205·1	189·9
1938.........	98·9	103·2	100·6	1947.........	191·2	233·5	207·7
1939.........	108·2	107·9	108·1	1948.........	197·1	244·4	215·5
1940.........	124·6	149·7	134·4	1949.........	198·2	246·3	217·0
1941.........	148·7	218·5	175·9	1950.........	208·3	259·1	228·1
1942.........	169·4	288·1	215·7	1951.........	214·0	285·9	242·1
1943.........	171·5	333·0	234·5	1952.........	215·2	294·8	246·3

The period 1935-52 was characterized by unprecedented industrial expansion. Emerging from a depression practically world-wide in scope, industrial operations in Canada entered a period of rapid growth which was maintained throughout the war and post-war years without important interruption.

The volume of output of manufactures rose steeply after the outbreak of hostilities in 1939. Productive facilities responded quickly to the urgent requirements of the Armed Forces. In the early days of the War, production assignments allotted were comparatively simple but, as pre-war weapons became obsolete and as Canada proved capable of turning out larger and more complex equipment, the assignments constantly shifted, changed and grew more difficult. The production figures merely suggest the magnitude of the achievement. They cannot describe the tremendous effort needed to convert a semi-agricultural country into a wartime arsenal nor the complications that arose because of shortages of manpower, tools and materials.

The productive peak was reached in 1944, when weapons, supplies and equipment were rolling off the assembly lines at a record-breaking pace. The end of hostilities and the subsequent reconversion to peace-time production were attended by declines in output in 1945 and 1946. The upward trend was resumed, however, in 1947. The rate of advance slackened moderately in 1948 and 1949 but regained most of its 1947 impetus in 1950 when the renewal of hostilities in Korea resulted in heavy anticipatory buying on the part of consumers and in growing expenditures for national defence. In 1951, the index of the volume of manufacturing production had practically equalled the record wartime level of 242·3 established in 1944, and a new record of 246·3 was reached in 1952.

A problem confronting business economists is to determine how much of the post-war industrial 'drive' was caused by normal growth factors and how much of it was caused by the backlog of war-accumulated demand. Though it is true that the greatest demand accumulation took place in housing and consumer durables, non-durables such as textiles and clothing also started the post-war period with a sizable backlog of unfilled demand. It is now becoming apparent, after the vigorous pace of business following the outbreak of hostilities in Korea, that a considerable portion of this demand has been satisfied and some industries, notably textiles, clothing and some major appliances, are experiencing difficulties. However, general prospects appear bright. The increased productive activity which will result from the present very high level of capital investment is not as yet fully reflected in current production statistics. Huge expansion and development programs are well under way in iron ore, steel, aluminum and other metals, oil, chemicals, motor-vehicles, electric power, and in a number of other industries.

Non-durable Manufactures.—The trend of output during 1935-52 in the non-durable sector of manufacturing was visibly smoother than in the durable sector. Except in two years, 1938 and 1945, there was no interruption in the upward movement of production during the period under review. Despite the fact that war contracts quickened the pace of output in some of the industries, production continued to expand after the War, although at a slower rate. Unlike durable goods, non-durable commodities are mostly consumer goods and are less influenced by sudden changes in the international situation or the capital investment programs of producers and governments. By 1951, the non-durables index of output had reached 214·0 and, by 1952, 215·2, the highest on record.

7.—Indexes of the Volume of Manufacturing Production of the Groups Comprised within the Non-durable Manufactures Classification, 1943-52

(1935-39=100)

NOTE.—Indexes for the years 1935-42 are given in the 1954 Year Book, p. 629.

Year	Foods	Beverages	Tobacco and Tobacco Products	Rubber Products	Leather Products	Textile Products (except Clothing)	Clothing (Textile and Fur)	Paper Products	Printing, Publishing and Allied Trades	Products of Petroleum and Coal	Chemicals and Allied Products
1943	156·0	162·0	183·8	147·0	151·1	172·1	156·7	140·0	111·7	150·0	369·3
1944	171·1	190·5	200·6	149·0	149·6	162·0	147·1	149·1	114·9	171·8	390·4
1945	170·0	205·1	230·2	180·2	155·0	160·5	146·6	161·2	125·8	167·5	292·8
1946	177·2	234·4	204·4	158·0	167·9	161·7	152·9	188·9	143·8	167·4	237·7
1947	181·5	249·4	211·9	230·7	148·7	172·9	147·7	207·4	163·3	181·2	245·5
1948	183·0	270·9	215·8	227·6	129·6	180·2	156·0	217·7	177·2	199·0	243·2
1949	180·3	285·7	224·4	208·5	133·5	186·0	159·4	213·7	183·8	218·0	239·5
1950	183·6	282·9	227·5	251·9	126·8	212·4	155·7	230·4	195·3	243·5	253·7
1951	188·7	297·7	212·2	264·3	117·0	208·6	149·7	247·8	194·7	274·9	267·8
1952	195·5	323·6	242·3	246·4	128·0	184·1	154·4	235·5	192·4	295·1	272·4

Durable Manufactures.—The tremendous increase in physical output during the war years was mostly concentrated in the durable goods sector. When war was declared in September 1939, there were virtually no armament works, no production of large ships and large aircraft, no guns and no tanks. Within a few years Canadian plants were turning out naval and merchant ships, war aircraft, military vehicles, ammunition and hundreds of other war items. The new volume index of durable manufactures reached a peak of 340·1 in 1944, declined sharply to 205·1 in 1946 and increased again to 294·8 in 1952.

8.—Indexes of the Volume of Manufacturing Production of the Groups Comprised within the Durable Manufactures Classification, 1943-52

(1935-39=100)

Note.—Indexes for the years 1935-42 are given in the 1954 Year Book, p. 630.

Year	Wood Products	Iron and Steel Products	Transportation Equipment	Non-ferrous Metal Products	Electrical Apparatus and Supplies	Non-metallic Mineral Products	Miscellaneous Manufactures
1943..........	148·4	362·4	562·8	284·9	310·5	211·6	314·6
1944..........	153·4	326·2	693·7	256·2	312·1	205·3	317·1
1945..........	155·6	265·2	453·7	193·4	258·1	195·8	275·9
1946..........	175·0	222·6	221·5	160·1	247·3	221·4	225·0
1947..........	195·6	249·9	239·5	182·8	316·8	269·8	233·4
1948..........	200·7	270·4	232·6	201·6	328·5	283·7	224·5
1949..........	202·3	264·5	243·9	200·5	333·8	284·4	261·6
1950..........	215·1	263·2	262·2	212·8	367·6	314·6	281·7
1951..........	220·6	292·2	315·0	234·7	392·3	342·1	283·2
1952..........	214·1	292·3	373·1	232·2	393·1	346·1	280·7

Section 2.—Production by Industrial Groups and Individual Industries

In 1949 two major changes were adopted in the compilation of manufacturing statistics—statistics for Newfoundland were included and the system of classification was changed. By the Standard Classification the industries are grouped under the 17 major headings listed in Table **9** instead of the nine groups listed in Table **3** which were formerly used as the main basis of classification. Summary statistics for the main groups on the new basis are given for 1945-52 in Table **10**, while 1951 and 1952 statistics for individual industries are presented in detail in Tables **11** and **12**. Table **14** gives the industries on the basis of the origin of the materials used.

Subsection 1.—Manufactures Classified on the Standard Classification Basis

Table **9** shows the changes in the nature of manufacturing production since the end of World War II with regard to numbers employed, salaries and wages paid, and gross value of products. The values of both wages and products are naturally more affected by price changes than the numbers of employees. Furthermore, during periods of curtailed production there is a tendency for wage-earners to be put on part time, while the number of salaried employees responds less quickly to reduction in output. Thus, variation in number of employees would normally be less pronounced than that in money values.

The most notable change took place in the transportation equipment group which, in the first four years after the War, showed a decline of 31·2 p.c. in employees and of 17·1 p.c. in salaries and wages and only a small increase in value of products. However, in the following three years the picture changed, this group showing higher increases than any other group in all three categories.

9.—Percentage Variations in Employment, Salaries and Wages, and Gross Value of Products in the Main Industrial Groups, 1949 Compared with 1945, and 1952 with 1949.

Industrial Group	1949 Compared with 1945			1952 Compared with 1949		
	Employees	Total Salaries and Wages	Gross Value of Products	Employees	Total Salaries and Wages	Value of Factory Shipments[1]
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Food and beverages	+8·1[2]	+48·5[2]	+49·5[2]	+3·3	+29·2	+20·5
Tobacco and tobacco products	−12·2	+39·1	+42·3	−13·2	+16·0	+25·2
Rubber products	−11·8	+23·2	−1·6	+4·1	+35·9	+60·6
Leather products	+2·3	+38·0	+25·6	−8·0	+10·8	+4·0
Textile products (except clothing)	+18·9	+78·6	+65·1	−6·5	+14·4	+16·9
Clothing (textile and fur)	+17·8	+57·1	+52·6	−0·1	+16·5	+17·3
Wood products	+28·9[2]	+86·7[2]	+83·9[2]	+7·3	+33·1	+38·9
Paper products	+20·7[2]	+80·5[2]	+95·1[2]	+8·5	+40·5	+38·2
Printing, publishing and allied trades[3]	+31·2	+81·2	+84·1	+4·3	+31·6	+29·9
Iron and steel products	−3·4	+31·6	+49·0	+15·6	+49·3	+50·4
Transportation equipment	−32·4	−17·1	+2·8	+39·7	+74·7	+69·6
Non-ferrous metal products	+1·1	+39·9	+58·0	+14·0	+45·8	+40·1
Electrical apparatus and supplies	+26·7	+79·5	+110·9	+23·8	+58·5	+47·2
Non-metallic mineral products	+38·8	+96·0	+88·6	+11·7	+43·7	+42·0
Products of petroleum and coal	+26·2	+73·7	+97·6	+16·2	+59·8	+46·2
Chemical products	−32·6	−6·0	+17·8	+15·4	+47·1	+35·6
Miscellaneous industries	[4]	[4]	[4]	+13·0	+44·9	+44·3
Averages, All Groups[3]	**+3·6[2]**	**+39·2[2]**	**+50·0[2]**	**+10·0**	**+40·3**	**+36·1**

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[1] Compared with gross value of products figures for 1949. [2] Excludes Newfoundland. [3] Excludes "Publishing (only) of Periodicals". [4] Owing to the change of establishments from one industry to another, figures for 1949 are not comparable with those for previous years.

10.—Summary Statistics of Manufactures, by Industrial Group, Alternate Years, 1945-51 and 1952

NOTE.—Figures for 1946, 1948 and 1950 will be found in the 1952-53 Year Book, pp. 611-613.

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
	No.	No.	$	$	$	$
Food[2] and Beverages—						
1945	8,872	156,396	224,908,882	1,336,820,028	558,247,045	1,921,774,601
1947	8,869	167,865	276,245,015	1,656,529,086	695,092,932	2,383,975,675
1949	8,558	170,024	332,536,319	2,009,246,062	834,017,547	2,882,581,753
1951	8,388	172,493	392,859,435	2,419,206,798	985,240,884	3,450,030,515
1952	8,263	175,552	429,650,055	2,333,089,054	1,091,944,158	3,472,516,950
Tobacco and Tobacco Products—						
1945	86	12,164	15,738,041	79,176,519	42,985,992	122,543,932
1947	91	10,880	16,234,772	97,121,002	49,221,094	146,793,011
1949	72	10,686	21,896,378	113,357,196	58,529,226	172,420,213
1951	62	9,826	24,438,218	119,590,053	59,033,325	179,177,093
1952	61	9,277	25,405,072	144,537,670	70,777,110	215,914,370
Rubber Products—						
1945	55	23,490	39,111,477	78,500,892	98,836,225	181,413,226
1947	60	23,475	46,613,893	82,934,625	110,673,007	196,307,734
1949	62	20,729	48,172,207	73,895,718	101,705,513	178,503,559
1951	67	23,054	64,357,696	146,951,650	161,184,980	311,678,489
1952	70	21,582	65,477,683	120,799,295	162,493,060	286,654,629

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.
[2] Excludes fish processing in Newfoundland from 1945 to 1949.

10.—Summary Statistics of Manufactures, by Industrial Group, Alternate Years, 1945-51 and 1952—continued

Note:—Figures for 1946, 1948 and 1950 will be found in the 1952-53 Year Book, pp. 611-613.

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
	No.	No.	$	$	$	$
Leather Products—						
1945	706	34,123	43,268,635	95,006,015	71,297,713	167,888,463
1947	792	35,724	52,628,612	123,894,474	86,646,061	212,430,165
1949	747	34,900	59,699,886	117,869,462	91,157,684	210,804,174
1951	711	31,578	59,668,764	135,114,110	84,885,048	221,882,794
1952	701	32,103	66,153,490	115,714,505	101,511,149	219,200,929
Textile Products (except Clothing)—						
1945	664	66,011	88,372,939	217,289,281	165,689,522	391,182,025
1947	747	73,979	116,228,736	289,986,732	215,170,493	514,844,838
1949	847	77,773	156,166,554	339,644,950	285,641,367	636,824,130
1951	892	81,710	185,030,489	495,304,102	337,936,447	846,477,303
1952	918	72,739	178,689,466	418,522,518	312,627,434	744,141,645
Clothing (Textile and Fur)—						
1945	2,676	99,959	131,478,496	251,899,847	222,307,384	476,754,319
1947	3,121	110,329	166,951,727	311,018,817	300,527,093	614,594,703
1949	3,058	117,752	206,512,782	371,128,833	352,741,236	727,498,836
1951	3,083	115,733	222,364,947	405,347,118	370,672,177	780,012,025
1952	3,041	117,668	240,539,672	443,956,596	405,091,338	853,151,206
Wood Products—						
1945	7,656	93,209	119,833,932	240,482,275	208,979,657	454,447,165
1947	9,744	120,434	186,467,946	398,854,196	365,050,223	771,403,332
1949	11,191	121,632	224,902,644	436,637,453	393,928,758	840,355,634
1951	11,975	131,278	283,062,074	610,807,577	529,300,377	1,153,376,772
1952	12,467	130,468	299,430,981	618,979,510	534,155,313	1,167,629,531
Paper Products—						
1945	475	60,819	109,627,174	255,265,326	241,121,150	536,859,861
1947	502	73,445	168,632,394	410,456,570	443,374,435	911,238,813
1949	524	76,471	208,348,621	494,300,501	532,288,636	1,093,060,326
1951	547	82,889	276,521,006	683,488,653	827,924,962	1,589,842,162
1952	543	82,965	292,682,283	694,190,401	736,217,142	1,510,148,791
Printing, Publishing and Allied Trades—						
1945	2,312	43,565	74,257,775	52,655,848	132,385,988	186,945,134
1947	2,458	52,096	101,611,652	82,585,466	178,667,051	263,632,152
1949	3,866	61,834	141,489,984	124,684,351	250,162,704	377,908,182
1951	4,019	64,694	170,828,730	152,753,412	295,642,569	452,142,515
1952	4,124	64,485	186,250,715	160,393,787	326,662,173	490,934,851
Iron and Steel Products—						
1945	1,903	169,278	313,966,173	395,624,098	527,473,688	952,482,150
1947	2,200	162,399	334,044,246	451,289,335	580,342,444	1,064,654,410
1949	2,347	163,622	413,227,553	619,499,256	760,934,249	1,419,145,725
1951	2,435	183,323	547,314,615	860,565,510	991,334,800	1,904,650,130
1952	2,625	189,191	617,010,924	947,993,190	1,134,043,024	2,135,031,744
Transportation Equipment—						
1945	504	154,844	326,748,794	498,241,686	523,910,119	1,034,666,913
1947	562	104,348	230,898,680	426,573,091	366,151,761	803,611,372
1949	596	104,750	270,852,111	584,064,330	466,529,164	1,063,211,331
1951	599	122,517	368,106,433	870,178,794	657,424,400	1,541,589,828
1952	617	146,360	473,118,450	1,009,470,570	778,347,604	1,803,699,823
Non-ferrous Metal Products—						
1945	436	44,221	81,889,942	337,872,041	180,653,076	548,853,026
1947	503	43,344	91,046,568	434,517,197	201,162,856	668,074,514
1949	532	44,698	114,591,106	537,218,214	289,125,045	867,043,028
1951	536	50,114	150,733,704	797,412,763	406,616,836	1,253,599,168
1952	552	50,938	167,045,084	744,596,427	414,920,456	1,215,118,447

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

10.—Summary Statistics of Manufactures, by Industrial Group, Alternate Years, 1945-51 and 1952—concluded

NOTE.—Figures for 1946, 1948 and 1950 will be found in the 1952-53 Year Book, pp. 611-613.

Industrial Group and Year	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
	No.	No.	$	$	$	$
Electrical Apparatus and Supplies—						
1945	247	44,129	76,468,795	92,041,030	135,919,899	230,531,874
1947	296	52,736	103,891,016	162,131,266	200,859,040	366,506,203
1949	365	55,916	137,278,521	212,460,413	269,341,983	486,286,355
1951	373	67,626	194,749,038	316,561,307	353,602,872	676,008,959
1952	401	69,200	217,564,936	313,713,170	395,933,805	715,873,342
Non-metallic Mineral Products—						
1945	700	20,269	32,959,877	41,488,955	76,318,456	130,704,796
1947	863	26,443	50,456,143	66,266,546	115,277,990	201,786,910
1949	1,020	28,139	64,594,354	78,401,065	143,872,615	246,457,799
1951	1,042	31,522	86,078,972	109,011,701	195,348,829	334,875,398
1952	1,057	31,422	92,818,919	115,217,568	203,692,859	350,051,630
Products of Petroleum and Coal—						
1945	80	11,532	22,904,418	188,899,911	65,637,131	270,166,984
1947	80	12,769	28,689,932	257,420,851	84,073,746	361,333,008
1949	77	14,552	39,783,500	391,036,128	117,819,090	533,730,719
1951	82	15,598	51,947,890	497,982,695	179,872,590	709,550,035
1952	101	16,905	63,573,173	519,629,241	225,825,749	780,436,047
Chemicals and Allied Products—						
1945	986	61,339	107,050,824	228,855,956	252,944,165	498,630,798
1947	1,046	39,237	78,993,517	238,310,157	234,056,973	488,307,293
1949	1,037	41,328	100,690,662	280,008,945	288,171,551	587,398,215
1951	1,037	45,664	131,310,151	366,957,695	384,026,141	776,489,391
1952	1,075	47,694	148,075,675	357,818,760	414,087,592	796,562,234
Miscellaneous Industries—						
1945	692	24,024	37,187,275	83,549,139	59,608,689	144,523,599
1947	800	22,247	36,291,117	44,390,608	65,708,603	111,532,447
1949	893	26,401	51,147,475	59,778,187	94,600,066	156,363,321
1951	1,173	28,756	66,908,755	87,292,415	120,899,546	210,804,555
1952	1,313	29,833	74,133,582	87,550,232	135,203,233	225,620,866

[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

Table **11** presents, for the years 1951 and 1952, detailed statistics of the individual industries under which all industrial plants in Canada are classified. In interpreting these figures it should be remembered that they do not refer to individual products but to all the products made in an industry. For example, the value of shipments of the confectionery industry amounting to $98,356,141 in 1952 does not imply that this was the value of confectionery shipped. What it means is that the firms whose principal product is confectionery had a value of shipments amounting to $98,356,141. This figure, in addition to confectionery, includes the shipments of all the subsidiary products made by these firms, such as ice cream, which was valued at $2,754,789, and bread and other bakery products valued at $2,632,228. Confectionery is also produced as a subsidiary product by firms credited to other industrial classifications. The quantities and values of the principal individual commodities produced are given in Table **12**. Commodities produced in small quantities are not included but the list covers approximately 75 p.c. of total production.

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1951 and 1952

Group and Industry	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Food and Beverages—												
Bakery Products—												
Biscuits	46	6,176	11,920,673	34,863,609	36,208,624	71,899,578	47	6,181	13,017,891	35,253,637	39,534,718	75,650,100
Bread and other bakery products	2,607	32,252	67,115,919	121,376,693	116,352,428	245,288,370	2,585	33,011	74,244,786	122,229,789	129,740,849	260,181,410
Beverages—												
Aerated waters	510	7,389	16,048,878	33,195,192	55,132,309	90,513,627	514	7,602	18,391,235	35,844,705	66,935,840	105,050,188
Breweries	63	8,449	27,489,309	45,905,901	112,741,266	161,159,033	61	8,163	30,143,552	49,713,488	126,465,413	178,768,806
Distilled liquors	20	4,643	12,938,163	43,393,190	68,097,335	113,695,516	21	4,784	14,129,557	43,188,519	70,733,919	115,984,960
Wines	26	556	1,677,916	4,356,877	5,614,554	10,098,170	25	556	1,820,480	4,026,160	6,179,858	10,332,557
Canning and Processing—												
Fish processing	633	14,911	24,744,189	101,621,086	58,665,035	163,010,208	635	14,354	24,426,351	86,457,993	45,734,589	134,725,304
Fruit and vegetable preparations	459	16,401	30,107,576	116,052,675	81,999,840	200,779,150	462	16,020	31,992,856	120,602,514	88,490,233	211,787,559
Dairy Products—												
Butter and cheese	1,690	20,900	46,781,550	284,602,975	82,416,262	373,745,860	1,602	20,435	48,826,388	281,366,628	90,409,864	378,794,866
Cheese, processed	24	997	2,333,401	21,111,152	5,122,815	26,349,068	22	1,050	2,816,857	20,346,838	5,014,444	25,482,566
Condensed milk	31	1,495	3,752,507	53,113,387	12,554,063	67,051,828	31	1,590	4,276,300	56,774,144	13,802,905	72,229,860
Dairy products, other	44	789	1,714,629	5,855,335	4,262,026	10,382,943	43	825	1,935,099	6,469,020	5,195,815	11,992,513
Grain Mill Products—												
Feeds, stock and poultry, prepared	648	5,505	12,179,857	144,617,180	27,953,403	174,509,795	671	5,938	13,392,352	148,801,788	29,967,343	181,080,732
Feed mills	663	1,494	2,132,923	19,759,811	4,110,636	24,460,263	646	1,503	2,311,169	20,523,365	3,906,791	25,036,386
Flour mills	108	4,864	13,596,597	242,132,072	37,078,324	280,866,778	99	4,961	14,688,635	236,194,234	36,360,848	274,208,040
Foods, breakfast	20	1,254	3,586,673	11,179,392	12,179,023	23,695,909	19	1,373	3,991,363	10,818,892	13,464,846	24,636,246
Meat Products—												
Animal oils and fats	14	343	1,023,989	2,644,751	1,684,344	4,568,678	16	318	990,554	1,700,937	1,478,785	3,430,314
Sausage and sausage casings	77	1,013	2,241,088	13,098,706	4,714,222	18,040,208	78	1,126	2,527,874	11,594,221	5,561,582	17,407,137
Slaughtering and meat-packing	155	20,914	62,108,875	767,366,797	120,488,594	892,090,641	154	22,864	71,378,013	700,369,951	158,761,279	863,776,155
Miscellaneous Food Industries—												
Confectionery	195	8,821	16,867,348	48,795,224	40,311,474	90,220,866	182	9,285	18,703,410	52,891,618	44,341,932	98,356,141
Macaroni and kindred products	15	571	1,259,310	4,438,767	3,501,282	8,064,035	13	558	1,397,762	4,587,616	3,809,928	8,536,320
Sugar refining	12	3,562	10,272,939	107,540,497	28,728,247	139,109,277	12	3,492	11,044,491	93,303,708	33,044,822	129,038,298
Miscellaneous foods, *n.e.s.*	328	9,194	20,965,126	192,185,529	65,324,778	260,430,714	325	9,563	23,203,080	190,029,289	73,007,555	266,030,492
Totals, Food and Beverages	**8,388**	**172,493**	**392,859,435**	**2,419,206,798**	**985,240,884**	**3,450,030,515**	**8,263**	**175,552**	**429,650,055**	**2,333,089,054**	**1,091,944,158**	**3,472,516,950**

Tobacco and Tobacco Products—												
Tobacco, cigars and cigarettes	48	7,981	20,961,157	62,886,259	53,244,619	116,488,811	47	7,587	22,036,719	73,168,064	64,864,521	138,423,959
Tobacco, processing and packing	14	1,845	3,477,061	56,703,794	5,788,706	62,688,282	14	1,690	3,368,353	71,369,606	5,912,589	77,490,411
Totals, Tobacco and Tobacco Products	**62**	**9,826**	**24,438,218**	**119,590,053**	**59,033,325**	**179,177,093**	**61**	**9,277**	**25,405,072**	**144,537,670**	**70,777,110**	**215,914,370**
Rubber Products—												
Rubber goods (including footwear)	67	23,054	64,357,696	146,951,650	161,184,980	311,678,489	70	21,582	65,477,683	120,799,295	162,493,060	286,654,629
Totals, Rubber Products	**67**	**23,054**	**64,357,696**	**146,951,650**	**161,184,980**	**311,678,489**	**70**	**21,582**	**65,477,683**	**120,799,295**	**162,493,060**	**286,654,629**
Leather Products—												
Footwear, leather	290	19,999	35,847,436	67,338,736	52,010,174	119,905,782	282	20,697	41,092,001	65,391,217	62,280,614	128,265,771
Gloves and mittens, leather	75	2,303	3,496,470	7,285,990	5,498,420	12,843,522	77	2,194	3,447,086	6,252,555	5,444,805	11,756,460
Leather tanning	67	4,061	10,318,606	44,385,680	12,457,291	57,879,980	67	3,923	10,790,441	27,973,421	17,556,765	46,601,610
Other Leather Industries—												
Belting, leather	15	182	439,741	1,418,185	775,514	2,219,069	16	167	430,415	1,020,671	761,921	1,805,821
Boot and shoe findings, leather	25	513	1,220,668	2,909,390	1,673,004	4,639,269	27	587	1,424,030	2,975,447	2,035,298	5,079,631
Miscellaneous leather goods, *n.e.s.*	239	4,520	8,345,843	11,776,129	12,470,645	24,395,172	232	4,535	8,969,517	12,101,194	13,431,746	25,691,636
Totals, Leather Products	**711**	**31,578**	**59,668,764**	**135,114,110**	**84,885,048**	**221,882,794**	**701**	**32,103**	**66,153,490**	**115,714,505**	**101,511,149**	**219,200,929**
Textile Products (except Clothing)—												
Cotton Goods—												
Cotton thread	8	864	1,892,580	5,745,017	5,324,936	11,171,408	11	838	1,929,352	5,019,293	4,304,099	9,415,986
Cotton yarn and cloth	54	27,632	58,734,833	172,443,466	97,158,451	273,651,120	57	22,969	53,705,770	143,584,722	78,954,978	226,492,425
Miscellaneous cotton goods	13	695	1,922,192	8,342,900	3,997,727	12,462,557	13	665	1,944,529	6,772,181	3,584,881	10,488,679
Woollen Goods—												
Carpets, mats and rugs	22	1,455	3,698,615	8,769,831	7,227,333	16,313,738	21	1,549	3,893,911	6,848,325	6,279,589	13,427,279
Woollen cloth	88	9,407	20,773,185	60,068,359	29,980,765	91,365,498	81	8,152	19,464,534	40,542,112	31,200,946	73,136,637
Woollen yarn	53	3,845	8,094,500	31,391,933	12,790,315	44,718,027	51	3,440	7,863,795	21,137,627	13,123,193	34,765,701
Miscellaneous woollen goods	45	2,347	6,050,042	26,221,606	13,184,792	39,820,334	39	2,135	6,040,157	16,757,890	12,478,304	29,605,853
Synthetic textiles and silk	46	17,997	44,693,738	66,040,725	96,477,461	166,549,897	48	15,723	42,708,505	63,780,047	90,004,216	157,628,515
Other Primary Textiles—												
Dyeing and finishing of textiles	52	2,462	5,997,036	3,492,222	9,710,233	14,129,896	50	2,331	5,965,882	3,749,848	9,899,623	14,606,604
Narrow fabrics	46	2,202	4,753,850	8,081,312	8,654,462	16,907,298	52	2,035	4,629,909	7,960,677	8,569,563	16,715,760

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1951 and 1952—continued

Group and Industry	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Textile Products (except Clothing)—Concluded												
Other Textile Industries—												
Automobile accessories, fabric	9	694	1,737,883	3,478,348	3,323,657	6,843,973	12	788	2,044,019	4,508,505	3,263,913	7,817,461
Awnings, tents and sails	115	1,547	2,785,670	6,627,662	4,424,091	11,146,221	110	1,521	2,978,377	6,210,356	4,974,977	11,281,927
Bags, cotton and jute	33	1,312	2,483,760	33,916,959	4,713,005	38,729,194	34	1,199	2,527,248	26,955,208	3,140,718	30,196,073
Cordage, rope and twine	11	1,774	4,576,300	19,736,188	9,756,163	29,709,244	11	1,720	4,930,896	21,655,091	6,996,413	28,841,340
Embroideries, pleating, hemstitching, etc.	131	1,664	3,054,933	2,694,900	5,286,127	8,021,248	151	1,785	3,403,231	3,185,502	5,679,849	8,915,278
Oilcloth, linoleum and other coated fabrics	15	2,379	7,131,411	16,727,708	12,163,917	29,381,734	14	2,402	7,349,657	15,827,257	14,219,362	30,545,392
Miscellaneous textiles, *n.e.s.*	151	3,434	6,649,961	21,524,966	13,763,012	35,555,916	163	3,487	7,309,694	24,027,877	15,952,810	40,260,735
Totals, Textile Products (except Clothing)	**892**	**81,710**	**185,030,489**	**495,304,102**	**337,936,447**	**846,477,303**	**918**	**72,739**	**178,689,466**	**418,522,518**	**312,627,434**	**744,141,645**
Clothing (Textile and Fur)—												
Men's, Women's and Children's Clothing—												
Clothing, children's factory	156	5,655	9,173,100	18,066,604	15,584,008	33,768,340	164	6,326	10,836,753	23,528,486	18,405,873	42,071,853
Clothing, men's factory	577	32,732	62,316,166	131,612,306	106,308,266	238,661,331	587	35,583	70,782,226	151,357,963	125,282,646	277,426,014
Clothing, women's factory	912	28,688	56,764,282	102,135,519	95,097,888	197,750,934	853	28,433	60,193,172	113,479,386	103,426,871	217,441,071
Clothing contractors, men's	143	3,636	5,730,915	707,342	7,057,324	7,854,466	141	3,759	6,551,920	699,557	7,984,468	8,783,073
Clothing contractors, women's	82	1,855	2,700,399	170,537	3,930,289	4,141,163	96	2,149	3,191,448	230,535	4,057,527	4,332,887
Knitted Goods—												
Hosiery	124	11,311	23,499,418	25,658,754	39,814,373	66,229,482	123	10,198	23,682,900	22,239,835	39,402,326	62,425,982
Other knitted goods	171	13,877	25,500,794	58,743,251	43,709,059	103,490,643	165	13,036	25,279,909	58,133,735	41,216,915	100,394,867
Miscellaneous Clothing—												
Corsets	37	3,146	4,916,077	7,808,061	8,723,243	16,594,290	38	3,310	5,698,588	7,991,361	11,836,859	19,888,593
Fur dressing and dyeing	20	1,305	3,139,376	1,076,825	4,099,291	5,302,761	17	1,280	3,326,532	1,177,345	4,796,631	6,061,850
Fur goods	612	6,084	14,412,453	38,100,218	22,892,670	61,209,546	596	5,969	15,421,752	41,909,453	24,115,773	66,245,562
Gloves and mittens, fabric	15	771	1,062,411	2,371,187	1,958,814	4,344,873	14	716	957,335	2,057,724	1,771,496	3,849,293
Hats and caps	159	4,835	9,796,747	11,549,016	15,518,769	27,291,766	172	5,005	10,791,897	12,610,052	16,764,298	29,606,155
Oiled and waterproofed clothing	14	479	996,320	2,423,013	2,131,996	4,564,182	13	510	1,123,480	2,507,554	1,788,216	4,309,337
Clothing, *n.e.s.*	61	1,359	2,356,489	4,924,485	3,846,187	8,808,248	62	1,394	2,701,760	6,033,610	4,241,439	10,314,669
Totals, Clothing (Textile and Fur)	**3,083**	**115,733**	**222,364,947**	**405,347,118**	**370,672,177**	**780,012,025**	**3,041**	**117,668**	**240,539,672**	**443,956,596**	**405,091,338**	**853,151,206**

Wood Products—												
Furniture	1,430	27,274	61,429,275	90,323,522	98,474,043	190,907,429	1,557	27,188	65,889,501	96,063,263	106,056,991	204,265,922
Saw and Planing Mills—												
Flooring, hardwood	29	1,768	4,033,546	8,978,183	6,603,380	15,800,285	26	1,463	3,587,950	6,916,692	5,169,748	12,281,016
Sash, door and planing mills	1,698	19,357	40,460,680	109,505,507	66,936,399	178,765,263	1,728	19,525	43,986,907	116,980,088	71,918,158	191,451,085
Sawmills	7,934	62,415	132,058,607	313,174,713	271,865,508	591,551,749	8,283	60,931	135,540,707	299,506,832	261,325,619	568,023,148
Veneers and plywoods	47	7,163	18,176,975	31,202,287	40,732,585	72,522,267	50	7,815	20,591,308	33,972,787	38,436,503	73,126,024
Other Wood Industries—												
Beekeepers' and poultrymen's supplies	6	53	89,433	191,549	228,225	426,185	6	42	80,509	113,116	145,915	265,203
Boxes and baskets, wood	169	3,842	7,388,688	12,185,755	12,591,358	25,116,183	179	3,985	8,347,575	13,587,048	13,482,584	27,447,364
Coffins and caskets	57	1,300	2,701,758	3,707,392	4,302,664	8,118,738	60	1,312	2,845,835	3,818,364	4,625,387	8,548,504
Cooperage	136	891	1,819,843	4,431,813	2,515,852	7,038,590	111	780	1,710,166	4,204,828	2,710,401	7,017,448
Excelsior	13	165	301,150	358,931	500,856	883,880	13	167	323,787	336,140	518,281	888,735
Lasts, trees and shoe findings	14	511	981,778	790,991	1,426,884	2,246,656	14	547	1,135,505	940,847	1,699,435	2,673,062
Woodenware	32	703	1,233,906	1,209,177	1,720,595	2,989,254	29	724	1,283,342	1,278,658	1,688,892	3,033,515
Wood turning	76	1,333	2,503,939	2,944,006	3,931,855	6,986,896	80	1,200	2,474,942	2,822,125	3,744,654	6,669,928
Miscellaneous wood products, *n.e.s.*	334	4,503	9,882,496	31,803,751	17,470,173	50,023,397	331	4,789	11,632,947	38,438,722	22,632,745	61,938,577
Totals, Wood Products	**11,975**	**131,278**	**283,062,074**	**610,807,577**	**529,300,377**	**1,153,376,772**	**12,467**	**130,468**	**299,430,981**	**618,979,510**	**534,155,313**	**1,167,629,531**
Paper Products—												
Boxes and bags, paper	187	13,384	32,235,169	102,219,244	68,939,995	172,230,166	185	13,074	34,440,614	102,604,735	68,368,996	172,150,881
Pulp and paper	126	57,291	213,169,906	483,014,009	679,257,743	1,237,897,470	128	57,803	225,353,327	497,046,828	584,101,072	1,157,887,657
Roofing paper	26	2,333	6,213,829	19,824,477	21,424,467	41,879,206	26	2,294	6,735,777	19,334,385	21,820,715	41,813,738
Miscellaneous paper goods	208	9,881	24,902,102	78,430,923	58,302,757	137,835,320	204	9,794	26,152,565	75,204,453	61,926,359	138,296,515
Totals, Paper Products	**547**	**82,889**	**276,521,006**	**683,488,653**	**827,924,962**	**1,589,842,162**	**543**	**82,965**	**292,682,283**	**694,190,401**	**736,217,142**	**1,510,148,791**
Printing, Publishing and Allied Industries—												
Commercial Printing—												
Printing and bookbinding	1,623	23,213	57,218,345	55,113,171	93,607,704	150,031,501	1,669	22,898	61,776,455	56,570,169	102,375,524	160,278,195
Trade composition	46	765	2,320,718	316,262	3,377,659	3,730,934	50	766	2,582,946	301,951	3,735,732	4,074,127
Engraving, Stereotyping and Allied Industries—												
Engraving, stereotyping and electrotyping	124	4,277	14,304,835	5,226,191	20,912,265	26,421,385	123	4,174	15,074,207	5,133,790	22,410,866	27,830,768
Lithographing	71	4,521	12,693,770	15,893,567	21,227,486	37,357,946	72	4,205	13,026,746	15,014,368	23,537,578	38,802,206
Printing and Publishing—												
Printing and publishing	801	27,300	76,241,565	56,975,903	137,862,920	196,717,896	805	27,873	84,912,779	61,789,469	154,760,420	218,523,462
Publishing (only) of periodicals	1,354	4,618	8,049,497	19,228,318	18,654,535	37,882,853	1,405	4,569	8,877,582	21,584,040	19,842,053	41,426,093
Totals, Printing, Publishing and Allied Industries	**4,019**	**64,694**	**170,828,730**	**152,753,412**	**295,642,569**	**452,142,515**	**4,124**	**64,485**	**186,250,715**	**160,393,787**	**326,662,173**	**490,934,851**

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1951 and 1952—continued

Group and Industry	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Iron and Steel Products—												
Agricultural implements	81	17,236	52,217,430	96,469,032	72,719,250	171,172,496	85	18,046	62,423,716	109,827,515	93,778,210	205,775,487
Boilers, tanks and platework	64	7,490	24,268,698	27,339,236	46,829,163	75,081,142	74	8,159	28,269,151	36,028,035	53,455,691	90,428,315
Bridge building and structural steel	34	8,608	28,278,426	48,652,449	59,903,113	109,650,351	38	10,824	37,418,880	62,135,893	76,308,313	139,716,836
Castings, iron	205	17,462	52,128,413	75,003,538	86,683,461	165,174,661	203	15,937	51,142,241	78,461,149	89,181,703	170,968,719
Hardware, tools and cutlery	297	14,289	39,480,334	39,022,361	75,716,095	116,457,701	339	14,350	43,664,871	40,353,012	81,558,005	123,741,049
Heating and cooking apparatus	110	8,075	22,032,374	36,235,145	36,817,015	74,138,736	115	8,599	24,831,396	37,280,645	48,351,702	86,839,474
Machinery, household, office and store	67	9,900	26,116,107	39,694,393	51,156,419	91,748,638	72	9,855	29,390,495	41,040,567	56,758,816	98,768,609
Machinery, industrial	300	22,326	67,286,913	79,106,152	120,611,361	201,990,057	317	22,497	73,820,422	81,396,443	143,291,450	227,025,874
Machine shops	559	6,231	16,218,976	10,814,175	25,472,584	36,954,135	614	6,557	18,377,267	13,167,819	27,675,228	41,574,469
Machine tools	12	1,928	5,681,423	4,250,817	6,856,338	11,270,140	13	2,299	7,771,039	5,009,013	11,306,320	16,507,908
Primary iron and steel	57	33,393	108,561,802	223,011,814	209,472,365	464,587,486	58	35,001	124,387,290	239,001,158	233,577,318	504,000,394
Sheet metal products	277	17,437	49,037,352	108,335,172	86,629,030	197,114,226	304	17,341	52,568,840	115,072,180	96,233,575	213,585,114
Wire and wire goods	117	8,859	26,829,253	37,773,731	67,288,945	106,511,920	116	8,662	27,795,355	38,024,516	66,194,940	105,659,511
Miscellaneous iron and steel products	255	10,089	29,177,114	34,857,495	45,179,661	82,798,441	277	11,064	35,149,961	51,195,245	56,371,753	110,439,985
Totals, Iron and Steel Products	**2,435**	**183,323**	**547,314,615**	**860,565,510**	**991,334,800**	**1,904,650,130**	**2,625**	**189,191**	**617,010,924**	**947,993,190**	**1,134,043,024**	**2,135,031,744**
Transportation Equipment—												
Aircraft and parts	23	19,198	59,558,317	36,291,613	79,403,570	117,188,078	38	33,356	108,667,004	115,286,096	127,296,867	244,607,320
Bicycles and parts	7	1,054	2,916,941	4,224,024	4,121,721	8,496,915	9	932	2,843,674	3,255,112	4,263,178	7,645,126
Boat building	228	1,531	3,132,876	2,643,394	4,373,433	7,130,624	221	1,514	3,320,082	3,142,453	4,848,322	8,103,016
Carriages, wagons and sleighs	48	812	1,738,997	3,782,837	3,039,022	6,899,470	48	905	2,053,752	2,778,437	5,118,842	7,981,478
Motor-vehicles	19	30,479	101,342,774	469,114,484	271,113,834	742,895,888	19	31,102	113,607,071	497,474,097	267,099,575	767,354,984
Motor-vehicle parts	161	21,197	65,283,163	142,840,935	117,021,089	263,133,094	172	21,791	72,607,789	145,666,823	127,222,358	276,785,167
Railway rolling-stock	37	33,410	94,028,834	175,964,789	119,895,329	300,627,241	36	36.084	108,318,766	181,620,234	145,760,789	332,164,783
Shipbuilding	76	14,836	40,104,531	35,316,718	58,456,402	95,218,518	74	20,676	61,700,312	60,247,318	96,737,673	159,057,949
Totals, Transportation Equipment	**599**	**122,517**	**368,106,433**	**870,178,794**	**657,424,400**	**1,541,589,828**	**617**	**146,360**	**473,118,450**	**1,009,470,570**	**778,347,604**	**1,803,699,823**

Non-ferrous Metal Products—												
Aluminum products	84	7,156	20,583,599	43,492,395	42,391,900	87,417,572	88	7,295	23,657,893	44,015,385	43,969,019	89,647,575
Brass and copper products	153	10,077	29,318,076	121,703,878	56,176,303	179,997,887	153	9,711	31,034,274	121,374,319	61,126,829	184,671,951
Jewellery and silverware	209	5,738	13,315,583	29,314,583	20,705,029	50,374,213	215	5,548	13,486,371	22,612,299	22,135,745	45,106,237
Non-ferrous metal smelting and refining	17	22,814	75,474,505	553,658,940	262,972,790	861,315,930	17	24,608	87,964,295	519,781,231	266,721,382	837,074,065
White metal alloys	51	3,376	9,512,342	46,540,009	18,674,676	66,023,915	55	3,238	9,525,283	34,689,608	17,921,841	53,379,433
Miscellaneous non-ferrous metal products	22	953	2,529,599	2,702,958	5,696,138	8,469,651	24	538	1,376,968	2,123,585	3,045,640	5,239,186
Totals, Non-ferrous Metal Products	**536**	**50,114**	**150,733,704**	**797,412,763**	**406,616,836**	**1,253,599,168**	**552**	**50,938**	**167,045,084**	**744,596,427**	**414,920,456**	**1,215,118,447**
Electrical Apparatus and Supplies—												
Batteries	25	2,139	6,139,832	23,983,736	13,367,364	37,721,356	26	2,094	6,455,438	25,253,692	15,084,340	40,708,740
Radios and radio parts	70	10,131	28,268,089	41,158,787	43,845,136	85,624,192	91	11,756	33,984,529	62,481,751	59,454,350	122,602,702
Refrigerators, vacuum cleaners and appliances	87	8,803	24,052,114	54,789,621	54,129,163	110,012,514	86	8,150	24,011,232	41,355,257	54,171,130	96,608,108
Machinery, heavy electrical	50	25,296	75,598,912	96,604,451	123,141,325	221,569,105	52	25,796	86,853,545	90,300,105	144,997,030	237,312,982
Miscellaneous electrical apparatus and supplies	141	21,257	60,690,091	100,024,712	119,119,884	221,081,792	146	21,404	66,260,192	94,322,365	122,226,955	218,640,810
Totals, Electrical Apparatus and Supplies	**373**	**67,626**	**194,749,038**	**316,561,307**	**353,602,872**	**676,008,959**	**401**	**69,200**	**217,564,936**	**313,713,170**	**395,933,805**	**715,873,342**
Non-metallic Mineral Products—												
Abrasives, artificial	19	2,989	9,675,282	17,668,167	23,433,673	44,920,949	20	2,607	9,248,935	13,967,649	19,437,527	36,717,228
Asbestos products	16	1,948	5,386,693	9,157,249	9,900,136	19,637,451	17	1,826	5,448,895	9,306,930	9,795,730	19,638,570
Cement	10	1,943	6,304,906	7,324,048	26,631,501	43,023,845	11	2,251	7,921,299	8,611,572	32,664,254	51,029,930
Concrete products	427	5,169	12,449,150	23,076,549	27,772,451	52,441,096	451	6,030	16,412,602	31,044,970	34,816,262	67,756,528
Clay products from domestic clay	129	3,873	10,258,994	794,483	18,319,101	23,527,656	133	3,717	10,456,108	840,756	19,844,680	24,961,528
Clay products from imported clay	35	2,526	6,372,732	4,382,230	11,695,364	16,948,304	34	2,432	6,300,265	4,050,520	10,781,714	15,667,596
Glass and glass products	113	6,527	17,660,204	20,551,774	30,818,885	54,913,292	114	6,516	19,102,882	22,192,757	32,694,612	58,779,800
Gypsum products	10	1,138	3,304,295	8,463,839	9,577,148	18,886,007	11	1,230	3,708,426	8,115,956	9,436,849	18,355,812
Lime	44	1,117	3,143,122	921,266	10,390,230	14,670,197	42	1,012	3,170,476	1,014,789	9,784,399	14,219,453
Salt	12	748	1,830,334	1,596,119	6,631,889	9,201,265	12	677	2,021,384	2,014,335	5,995,833	9,056,079
Sand-lime brick	5	198	541,034	512,094	1,254,547	1,855,135	4	183	540,108	516,331	1,064,330	1,652,594
Stone products	161	2,270	6,198,170	6,733,301	11,206,251	18,705,651	155	2,142	6,203,703	7,354,093	11,923,780	20,105,980
Miscellaneous non-metallic mineral products	61	1,076	2,954,056	7,830,582	7,717,653	16,144,550	53	799	2,283,836	6,186,910	5,452,889	12,110,532
Totals, Non-metallic Mineral Products	**1,042**	**31,522**	**86,078,972**	**109,011,701**	**195,348,829**	**334,875,398**	**1,057**	**31,422**	**92,818,919**	**115,217,568**	**203,692,859**	**350,051,630**

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

11.—Principal Statistics of Individual Manufacturing Industries, classified on the Standard Classification Basis, 1951 and 1952—concluded

Group and Industry	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Products of Petroleum and Coal—												
Coke and gas products	30	4,987	14,869,264	59,515,556	43,970,068	110,609,519	29	4,920	16,375,336	63,107,093	43,919,907	113,990,070
Petroleum products	52	10,611	37,078,626	438,467,139	135,902,522	598,940,516	55	11,661	46,145,422	453,954,688	178,523,582	660,356,584
Miscellaneous products of petroleum and coal	—	—	—	—	—	—	17	324	1,052,415	2,567,460	3,382,260	6,089,393
Totals, Products of Petroleum and Coal	**82**	**15,598**	**51,947,890**	**497,982,695**	**179,872,590**	**709,550,035**	**101**	**16,905**	**63,573,173**	**519,629,241**	**225,825,749**	**780,436,047**
Chemicals and Allied Products—												
Acids, alkalies and salts	29	7,371	24,579,398	39,238,794	67,456,301	117,822,758	29	7,591	27,208,422	37,777,278	65,243,067	114,187,526
Fertilizers	39	3,218	10,310,069	35,294,282	37,427,873	74,488,720	39	3,205	11,325,300	38,450,277	38,406,176	78,743,491
Medicinal and pharmaceutical preparations	206	7,481	18,917,850	28,414,566	60,115,166	89,248,867	213	7,457	20,481,873	27,350,129	59,920,653	88,022,387
Paints, varnishes and lacquers	114	5,859	16,129,180	55,700,822	48,430,359	104,839,285	116	5,784	17,220,333	53,118,889	53,554,297	107,406,164
Primary plastics	16	1,648	5,402,853	20,571,434	18,091,655	39,370,423	16	1,850	6,505,167	18,774,923	15,129,313	34,638,754
Soaps, washing compounds and cleaning preparations	130	3,742	11,506,281	41,757,694	30,943,090	73,718,714	136	3,756	12,755,324	35,013,348	48,368,279	84,461,282
Toilet preparations	97	1,800	3,775,166	8,223,549	14,211,418	22,535,080	101	1,870	4,244,777	9,720,012	17,224,337	27,059,783
Vegetable oils	13	751	2,316,979	48,729,012	10,849,240	60,202,123	13	723	2,428,287	44,478,536	6,872,308	51,931,990
Other Chemical Industries—												
Adhesives	29	714	1,971,906	6,280,084	4,787,488	11,437,037	30	706	2,128,897	6,106,121	4,365,376	10,838,879
Coal tar distillation	11	468	1,442,776	7,077,237	4,331,465	12,077,290	11	500	1,679,495	7,143,102	4,835,360	12,634,276
Gases, compressed	51	1,247	3,681,376	2,408,694	12,387,572	15,378,363	47	1,250	3,889,969	2,425,663	13,307,400	16,201,464
Inks	34	828	2,452,014	5,208,361	5,289,170	10,582,762	34	854	2,584,220	4,839,331	5,995,401	10,923,553
Polishes and dressings	49	800	1,852,790	6,399,459	6,768,318	13,244,675	51	751	1,928,870	7,734,894	8,129,702	15,966,171
Miscellaneous chemical products, *n.e.s.*	219	9,737	26,971,513	61,653,707	62,937,026	131,543,294	239	11,397	33,694,741	64,886,257	72,735,923	143,546,514
Totals, Chemical and Allied Products	**1,037**	**45,664**	**131,310,151**	**366,957,695**	**384,026,141**	**776,489,391**	**1,075**	**47,694**	**148,075,675**	**357,818,760**	**414,087,592**	**796,562,234**

Miscellaneous Industries—												
Brooms, brushes and mops....	94	2,313	4,785,425	9,183,187	8,410,464	17,726,999	96	2,177	4,787,774	7,947,253	8,574,281	16,654,381
Clocks, watches and watch cases	29	1,185	2,991,396	5,777,790	4,778,441	10,591,405	31	1,032	2,853,417	5,162,619	5,839,870	11,035,592
Fountain pens and pencils.....	20	1,122	2,669,218	4,239,976	5,515,281	9,814,266	20	1,080	2,670,986	3,755,188	5,657,987	9,473,760
Musical instruments..........	27	1,336	2,955,610	3,445,332	5,129,814	8,706,075	23	1,206	2,917,297	2,903,708	5,408,841	8,437,123
Plastic products.............	127	3,626	8,026,787	15,490,305	15,946,997	31,780,546	143	3,700	8,536,568	15,773,365	17,429,571	33,585,111
Scientific and professional equipment	100	4,174	12,035,607	14,150,895	22,499,682	36,996,345	116	5,396	16,627,838	15,554,628	28,059,219	43,991,817
Sporting goods...............	78	1,732	3,659,189	4,064,663	6,250,278	10,436,812	77	1,541	3,687,606	3,694,839	6,147,917	9,979,386
Toys and games...............	53	1,432	3,099,681	4,611,546	4,925,841	9,617,032	58	1,484	2,989,220	5,087,008	5,224,167	10,414,646
Typewriter supplies...........	7	397	1,023,355	2,375,846	1,955,279	4,361,009	8	431	1,142,437	2,177,550	2,266,661	4,474,391
Other Miscellaneous Industries—												
Artificial flowers and feathers	39	676	996,264	1,050,488	1,676,903	2,740,303	42	573	875,051	1,054,829	1,607,121	2,675,340
Buttons, buckles and fasteners	41	1,622	3,706,435	3,882,116	6,121,090	10,087,698	45	1,679	3,969,929	4,436,224	6,486,117	11,016,828
Candles......................	13	230	439,841	964,541	1,237,162	2,233,293	12	210	452,141	909,497	1,290,086	2,229,742
Hair goods...................	19	158	350,198	1,860,172	633,624	2,499,623	17	124	301,149	1,123,091	625,218	1,755,724
Ice, artificial...............	77	1,174	2,890,750	159,765	5,231,305	6,007,363	78	1,215	3,220,933	174,380	6,159,598	6,987,800
Lamps, electric, and lamp shades	55	1,164	2,167,450	3,624,308	3,690,651	7,395,374	59	1,245	2,426,725	4,516,335	4,514,199	9,113,968
Models and patterns, excluding paper	62	395	1,269,262	414,121	1,844,982	2,285,596	65	412	1,479,689	365,256	1,967,880	2,362,861
Pipes, lighters and smokers' supplies	14	340	804,948	1,199,482	1,473,549	2,694,501	14	285	640,690	1,070,115	1,065,978	2,157,895
Signs, electric, neon and other	103	2,001	5,336,652	4,765,596	10,021,946	15,058,938	176	2,356	6,609,424	5,344,140	12,711,681	18,386,046
Stamps and stencils, rubber and metal	49	649	1,567,568	763,665	2,365,826	3,159,259	54	870	2,185,405	1,212,582	3,374,794	4,641,330
Statuary, art goods, regalia and novelties	125	1,037	1,859,607	1,829,707	2,868,184	4,745,415	137	1,055	1,995,197	1,800,922	3,032,303	4,895,990
Umbrellas..................	8	183	298,175	707,975	469,104	1,179,455	8	148	262,149	614,676	428,482	1,045,602
Other miscellaneous industries	33	1,810	3,975,337	2,730,939	7,853,143	10,687,248	34	1,614	3,501,957	2,872,027	7,331,262	10,305,533
Totals, Miscellaneous Industries	**1,173**	**28,756**	**66,908,755**	**87,292,415**	**120,899,546**	**210,804,555**	**1,313**	**29,833**	**74,133,582**	**87,550,232**	**135,203,233**	**225,620,866**
Grand Totals, All Industries	**37,021**	**1,258,375**	**3,276,280,917**	**9,074,526,353**	**6,940,946,783**	**16,392,187,132**	**37,929**	**1,288,382**	**3,637,620,160**	**9,146,172,494**	**7,443,533,199**	**16,982,687,035**

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

12.—Quantity and Value of the Principal Commodities Produced by the Manufacturing Industries, 1951 and 1952

Group and Commodity	Unit of Measure	1951		1952	
		Quantity	Value	Quantity	Value
			$		$
Food—					
Biscuits, all kinds	lb.	222,403,645	67,525,753	229,912,336	70,547,771
Bread	"	1,045,169,780	149,481,587	1,523,881,705	161,552,890
Butter, factory made	"	259,188,310	163,306,022	285,127,118	169,978,171
Cheese, factory made	"	143,603,835	51,284,088	128,013,100	41,508,122
Confectionery, all kinds	...	..	65,865,363	..	71,624,917
Cream, sold in dairy factories	lb. b. fat	23,909,512	27,258,822	24,606,969	27,895,030
Feed, chopped, grain	ton	428,133	27,390,989	446,048	27,476,668
Feeds, stock and poultry	"	1,880,551	159,883,435	1,978,931	166,079,194
Fish, canned and otherwise prepared	...	..	79,745,627	..	58,712,874
Flour, wheat	bbl.	23,090,327	211,082,113	23,226,433	207,161,113
Fruits and vegetables, canned	lb.	573,823,530	73,646,487	609,192,393	74,786,219
Fruits and vegetables, frozen	"	25,575,769	4,727,800	30,981,192	5,963,726
Ice cream, factory made	gal.	24,452,217	40,641,686	27,234,342	46,435,387
Jams, jellies and marmalades	lb.	90,470,835	16,283,986	..	17,085,579
Lard	"	87,307,769	19,083,429	120,433,198	13,660,305
Meats, canned, including poultry, pastes, etc	"	65,551,993	33,169,389	145,928,401	79,217,227
Meats, cooked	"	46,664,576	29,603,688	49,883,009	30,308,963
Meats, cured	"	224,460,409	117,796,356	236,300,898	106,249,774
Meats, sold fresh	"	993,090,687	478,646,234	1,103,230,543	444,046,228
Meats, sold frozen	"	73,722,573	30,528,043	113,672,201	43,817,334
Milk, evaporated and condensed	"	309,981,777	40,016,748	322,288,903	40,651,153
Milk, sold in dairy factories	gal.	151,201,266	104,844,637	153,762,185	111,167,067
Pickles, relishes and catsup	...	..	19,260,234	..	19,885,172
Pies, cakes and pastry	...	..	64,745,925	..	67,087,567
Powders, edible (custard, jelly, milk, etc.)	lb.	125,898,137	29,693,398	..	32,710,445
Sausage, fresh and cured	"	76,735,427	35,584,933	78,510,055	32,680,943
Shortening	"	121,351,222	36,036,304	123,538,660	28,306,481
Sugar, granulated (cane and beet)	"	1,113,970,012	113,680,370	1,169,198,852	104,960,982
Tea and coffee, roasted, blended and packed	"	115,636,031	105,229,406	118,371,046	106,067,896
Drink and Tobacco—[1]					
Aerated waters	gal.	94,803,207	77,295,550	103,472,607	89,809,805
Beer, ale, stout and porter (sales)	"	177,657,694	271,555,265	193,830,348	300,475,178
Cigarettes	'000	15,816,166	261,909,840	18,037,368	290,947,786
Cigars	"	169,408	13,896,713	201,517	15,487,025
Spirits, potable, sold (net sales)	pr. gal.	10,801,225	94,453,985	11,171,830	86,141,890
Tobacco, chewing, smoking and snuff	lb.	30,567,989	70,812,214	33,950,025	83,320,646
Tobacco, raw leaf, processed	"	111,551,981	62,693,707	139,974,877	77,494,248
Wine, sold	Imp. gal.	4,386,918	11,147,846	4,502,282	11,258,650
Textile Products (except Clothing)—					
Bags, cotton and jute	No.	102,407,223	33,327,941	108,931,950	26,532,117
Blankets	...	..	18,565,571	..	16,979,249
Carpets, mats and rugs	...	..	14,919,284	..	12,625,490
Cotton fabrics	...	..	158,499,274	..	130,194,710
Synthetic fabrics, all types	yd.	115,131,918	90,109,875	101,897,589	79,569,853
Tire fabrics	lb.	31,705,148	25,836,355	27,005,981	21,782,167
Twine and cordage	...	..	33,769,867	..	25,305,862
Woollen cloth, woven and other	sq. yd.	31,125,617	73,342,095	28,695,924	59,375,186
Yarn, cotton, rayon, wool, etc. (for sale)	lb.	110,699,091	144,421,177	..	124,155,981
Clothing—					
Coats and overcoats, cloth, men's and youths'	No.	759,818	23,570,568	936,662	27,349,062
Coats, wool, women's and misses'	"	1,424,249	34,520,324	1,574,041	37,284,767
Coats, fur and fur-lined (factory made)	"	210,071	46,920,519	233,694	52,621,619
Coats, short (including windbreakers, mackinaws, parkas, leather coats, etc.)	doz.	247,204	21,396,405	331,269	23,748,525
Dresses, women's and misses'	No.	12,684,359	69,497,136	13,829,238	75,080,527
Footwear, leather	pr.	28,494,328	111,856,748	32,678.970	120,488,843
Footwear, rubber	"	15,702,188	43,091,337	13,880,803	38,775,100
Gloves and mittens, all kinds	doz. pr.	2,137,169	20,380,484	2,020,973	18,059.624
Hats and caps, men's	doz.	658,006	11,460,491	719,797	12,577,681

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[1] Includes excise taxes on prime cost of spirits and tobacco products.

12.—Quantity and Value of the Principal Commodities Produced by the Manufacturing Industries, 1951 and 1952—continued

Group and Commodity	Unit of Measure	1951		1952	
		Quantity	Value	Quantity	Value
			$		$
Clothing—concluded					
Hats, women's and children's	doz.	455,968	13,380,773	605,398	15,846,600
Hosiery, all kinds	doz. pr.	10,260,704	72,638,392	10,026,210	66,767,222
Shirts, fine, work and sport	doz.	1,882,667	46,843,961	2,051,663	49,441,244
Sport suits, slacks and other sport clothing, *n.e.s*	...	..	11,606,959	..	12,782,298
Suits, men's and youths', fine woollen	No.	1,321,472	49,625,259	1,266,799	48,270,674
Underwear	doz.	5,217,439	51,520,713	4,635,950	36,112,246
Wood Products—					
Boxes, wooden	...	..	13,490,637	..	14,082,390
Lumber, planed	M ft. b.m.	2,566,214	216,958,904	2,862,930	230,006,551
Lumber, sawn	"	5,311,997	365,780,466	5,037,029	341,885,440
Pulp, wood, made for sale	short ton	2,727,274	413,831,246	1,551,541	222,874,102
Sash, door, and other mill work	...	..	60,154,474	..	61,195,367
Paper Products—					
Bags, paper	...	..	43,165,603	..	41,339,022
Boxes, paper	...	..	126,066,844	..	127,933,804
Paper boards, all types	ton	..	128,409,233	870,204	105,885,607
Paper, newsprint, wrapping and book	"	..	677,815,457	6,158,620	703,517,316
Printing, Publishing and Allied Industries—					
Books and catalogues, printed and bound, chiefly for advertising	...	..	24,404,237	..	28,619,400
Other advertising matter, printed	...	..	35,446,079	..	39,083,479
Periodicals printed by publishers—					
Subscriptions and sales	...	..	58,334,894	..	63,269,508
Gross revenue from advertising	...	..	140,732,810	..	157,048,838
Periodicals printed for publishers	...	..	21,737,681	..	22,572,361
Sheet forms, commercial, printed	...	..	37,322,201	..	44,494,118
Iron and Steel Products—					
Bars, iron and steel, hot rolled, sold	net ton	587,160	73,105,972	600,302	81,124,625
Boilers, heating and power	...	..	18,588,095	..	18,942,207
Castings, grey iron, made for sale	ton	..	47,497,584	242,194	48,194,914
Farm implements and parts	...	..	188,183,920	..	194,688,000
Forgings, steel and other	...	..	23,795,775	..	32,024,227
Hardware, builders' and other	...	..	41,248,167	..	38,406,000
Machinery, industrial, household, office and store	...	..	482,723,179	..	517,326,995
Pig iron, sold	net ton	726,357	36,891,960	752,963	37,998,156
Pipes, tubing and fittings, iron and steel	...	..	92,200,000	..	99,530,000
Rolled iron and steel forms, semi-finished, sold	net ton	447,334	33,513,655	399,753	34,946,164
Sheets, bars and other cold rolled products, sold	"	599,895	99,960,581	573,923	99,765,009
Steel ingots and castings, sold	net ton	295,279	52,227,452	265,723	57,178,291
Steel shapes erected, bridge, etc	...	..	69,854,008	..	70,679,068
Steel shapes, structural, made in primary mills	net ton	223,281	21,612,870	212,919	22,140,506
Stoves, coal, wood, electric and gas	...	..	40,734,025	..	45,871,119
Tools, hand, all kinds	...	..	34,009,230	..	37,596,038
Wire, wire rope and cable, steel	...	..	37,682,984	..	39,321,521
Transportation Equipment—					
Aircraft, including parts and repairs	...	..	95,115,771	..	158,626,498
Automobile parts and accessories, including tires, etc	...	..	654,775,454	..	630,928,868
Automobiles, commercial	No.	132,706	212,806,695	149,611	244,474,471
Automobiles, passenger	"	282,714	438,613,532	283,534	417,654,448
Buses	"	685	10,476,480	565	8,772,823
Cars, freight, complete	"	10,612	75,341,642	11,905	88,242,963
Locomotives, diesel-electric, new	"	267	41,893,150	226	38,306,186
Ships and ship repairs	...	..	91,852,926	..	147,909,551

12.—Quantity and Value of the Principal Commodities Produced by the Manufacturing Industries, 1951 and 1952—concluded

Group and Commodity	Unit of Measure	1951		1952	
		Quantity	Value	Quantity	Value
			$		$
Non-ferrous Metal Products—					
Jewellery	...	..	16,012,399	..	18,522,000
Kitchenware, aluminum	...	..	9,130,152	..	8,142,097
Silverware	...	..	11,843,568	..	10,415,876
Smelter and refinery products	...	..	861,315,930	..	837,074,065
Electrical Apparatus and Supplies—					
Batteries, electric, and parts	...	..	31,562,595	..	32,004,341
Radio sets and accessories	...	..	48,447,556	..	39,465,857
Refrigerators, household, mechanical	No.	277,911	54,547,398	244,394	46,033,194
Television sets	"	48,657	12,902,090	141,946	30,072,795
Wires and cable, electric	...	..	123,768,524	..	121,652,458
Non-metallic Mineral Products—					
Abrasives, artificial	ton	265,656	30,748,225	211,363	24,918,618
Coke, gas-house	"	3,931,626	59,848,832	4,076,655	58,701,110
Concrete, ready-mixed	cu. yd.	1,557,664	17,290,381	1,994,079	23,415,036
Gas, sold	'000 cu. ft.	25,959,987	29,087,074	26,277,503	30,911,194
Glass, pressed and blown (bottles, sealers, etc.)	...	..	36,009,205	..	37,078,343
Chemicals and Allied Products—					
Calcium and sodium compounds	...	..	46,165,361	..	46,435,000
Enamels, lacquers and varnishes	...	..	46,408,649	..	44,916,036
Explosives	lb.	155,490,062	22,005,688	167,806,672	26,289,267
Gases, compressed and liquefied	...	..	11,100,940	..	28,896,000
Medicinal and pharmaceutical preparations	...	..	82,131,000	..	81,432,000
Paints, mixed, ready for use	Imp. gal.	11,090,935	41,521,166	10,553,583	40,013,956
Synthetic resins	...	..	23,097,000	..	19,100,000
Soap	lb.	197,221,000	37,674,000	196,090,000	39,675,000
Toilet preparation	...	..	30,873,102	..	37,280,597
Miscellaneous—					
Bags, hand, and hand luggage	...	..	11,381,286	..	12,946,610
Brooms and household brushes	doz.	..	5,063,469	806,276	5,129,065
Cans, metal, for food,	...	..	54,965,224	..	59,491,789
Furniture, wood and metal	...	..	146,388,264	..	156,832,663
Gasoline	Imp. gal.	1,845,846,568	300,360,166	2,063,056,519	329,531,770
Leather, shoe	...	..	39,011,541	..	32,678,619
Mattresses	...	..	16,579,619	..	18,213,780
Mops, floor	doz.	273,113	2,071,366	301,895	2,387,808
Oil, fuel	Imp. gal.	1,768,713,720	172,483,868	1,867,078,810	186,538,200
Pianos, organs, and parts	...	..	4,506,567	..	5,288,556
Scientific and professional equipment	...	..	36,996,345	..	43,991,817
Sporting goods	...	..	11,513,559	..	11,305,266
Springs, bed and other furniture	...	..	7,554,986	..	8,551,009
Toys and games	...	..	16,485,795	..	18,432,144

Subsection 2.—Manufactures Classified by Origin of Materials

The distinction made between farm materials of Canadian and of foreign origin is based on whether materials are indigenous to Canada rather than on their actual source. Thus, the industries included in the foreign origin classes are those depending upon materials that cannot be grown in Canada, such as tea, coffee, spices, cane sugar, rice, rubber, cotton, etc. Industries included in the Canadian origin classes may, however, be using large quantities of imported materials.

The mineral origin group includes, in addition to non-ferrous metals so largely produced in Canada, the manufactures of iron and steel, of petroleum, and of other mineral substances, the raw materials for which are very largely imported. Products of mineral origin, with the exception of fuels, are nearly all durable goods. A high standard of living and advanced industrial organization is usually indicated by a relatively large production and consumption of mineral products. During periods of depression when the production of capital goods is curtailed, employment in the industries of the farm group, which produce mainly consumer goods, exceeds that of the mineral group. The industries of the mineral group in 1952 employed the largest number of persons and paid out by far the highest amount in salaries and wages. The average salary and wage was $3,233 for the mineral group, $2,788 for the forest group and $2,422 for the farm group.

13.—Principal Statistics of Manufacturing Industries, classified according to Origin of Material Used, by Main Group, 1939, 1944, 1951 and 1952

Year and Origin of Material Used	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
	No.	No.	$	$	$	$
1939						
Farm origin	10,203	220,210	217,724,965	778,250,125	491,620,133	1,289,993,021
Mineral origin	3,474	210,752	280,054,303	669,728,573	598,024,704	1,321,444,094
Forest origin	8,430	142,091	160,798,500	244,944,997	297,563,280	572,335,960
Marine origin	523	5,369	3,638,794	18,114,698	10,311,304	28,816,536
Wildlife origin	384	4,604	5,396,623	11,592,066	8,251,880	19,961,526
Mixed origin	1,791	75,088	70,197,968	113,528,916	125,280,600	242,232,391
Grand Totals, 1939	**24,805**	**658,114**	**737,811,153**	**1,836,159,375**	**1,531,051,901**	**3,474,783,528**
Farm Origin Group—						
From field crops	6,096	124,708	126,311,033	410,994,461	335,287,457	759,964,866
From animal husbandry	4,107	95,502	91,413,932	367,255,664	156,332,676	530,028,155
Totals, Farm Origin	**10,203**	**220,210**	**217,724,965**	**778,250,125**	**491,620,133**	**1,289,993,021**
Canadian origin	9,382	171,460	168,260,771	630,779,223	366,146,937	1,011,294,132
Foreign origin	821	48,750	49,464,194	147,470,902	125,473,196	278,698,889
1944						
Farm origin	10,329	287,756	394,716,309	1,781,014,374	870,995,104	2,688,731,415
Mineral origin	4,479	634,542	1,208,779,764	2,258,796,792	2,312,260,844	4,708,104,244
Forest origin	10,347	186,680	278,171,969	495,531,476	541,521,976	1,082,160,284
Marine origin	535	9,664	10,327,695	45,906,542	22,066,801	68,882,879
Wildlife origin	535	6,190	9,430,191	28,076,572	15,728,926	43,985,177
Mixed origin	2,258	98,050	128,195,442	223,007,600	253,202,359	481,828,520
Grand Totals, 1944	**28,483**	**1,222,882**	**2,029,621,370**	**4,832,333,356**	**4,015,776,010**	**9,073,692,519**
Farm Origin Group—						
From field crops	6,307	164,514	226,751,705	888,435,918	563,349,320	1,477,008,962
From animal husbandry	4,022	123,242	167,964,604	892,578,456	307,645,784	1,211,722,453
Totals, Farm Origin	**10,329**	**287,756**	**394,716,309**	**1,781,014,374**	**870,995,104**	**2,688,731,415**
Canadian origin	9,493	225,077	303,293,749	1,507,501,822	668,958,344	2,202,655,904
Foreign origin	836	62,679	91,422,560	273,512,552	202,036,760	486.075,511

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

13.—Principal Statistics of Manufacturing Industries, classified according to Origin of Material Used, by Main Group, 1939, 1944, 1951 and 1952—concluded

Year and Origin of Material Used	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
	No.	No.	$	$	$	$
1951						
Farm origin	9,816	312,239	702,709,511	3,281,635,418	1,553,106,072	4,892,471,242
Mineral origin	6,109	517,079	1,537,131,218	3,757,080,165	3,137,209,177	7,104,016,198
Forest origin	16,417	274,584	716,106,975	1,441,823,451	1,631,955,643	3,168,940,064
Marine origin	633	14,911	24,744,189	101,621,086	58,665,035	163,010,208
Wildlife origin	632	7,389	17,551,829	39,177,043	26,991,961	66,512,307
Mixed origin	3,414	132,173	278,037,195	453,189,190	533,018,895	997,237,113
Grand Totals, 1951	**37,021**	**1,258,375**	**3,276,280,917**	**9,074,526,353**	**6,940,946,783**	**16,392,187,132**
Farm Origin Group—						
From field crops	6,142	180,788	416,421,285	1,739,956,828	1,060,429,903	2,839,625,828
From animal husbandry	3,674	131,451	286,288,226	1,541,678,590	492,676,169	2,052,845,414
Totals, Farm Origin	**9,816**	**312,239**	**702,709,511**	**3,281,635,418**	**1,553,106,072**	**4,892,471,242**
Canadian origin	8,947	242,208	534,880,813	2,739,054,575	1,174,031,701	3,957,392,807
Foreign origin	869	70,031	167,828,698	542,580,843	379,074,371	935,078,435
1952						
Farm origin	9,681	310,448	751,930,860	3,127,662,069	1,694,737,971	4,882,070,311
Mineral origin	6,438	553,525	1,789,646,188	3,951,508,235	3,545,121,461	7,718,043,252
Forest origin	17,011	273,744	763,289.772	1,468,429,908	1,574,623,762	3,140.882,405
Marine origin	635	14,354	24,426.351	86,457,993	45,734,589	134,725,304
Wildlife origin	613	7,249	18,748,284	43,086,798	28,912,404	72,307,412
Mixed origin	3,551	129,062	289,578,705	469,027,491	554,403,012	1,034,658,351
Grand Totals, 1952	**37,929**	**1,288,382**	**3,637,620,160**	**9,146,172,494**	**7,443,533,199**	**16,982,687,035**
Farm Origin Group—						
From field crops	6,114	175,519	438,429,742	1,695,982,351	1,116,653,002	2,852,611,414
From animal husbandry	3,567	134,929	313,501,118	1,431,679,718	578,084,969	2,029,458,897
Totals, Farm Origin	**9,681**	**310,448**	**751,930,860**	**3,127,662,069**	**1,694,737,971**	**4,882,070,311**
Canadian origin	8,797	246,825	584,371,370	2,659,556,833	1,321,738,620	4,027,895,006
Foreign origin	884	63,623	167,559,490	468,105,236	372,999,351	854,175,305

[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text on p. 633.

Subsection 3.—Manufactures Classified by Type of Ownership

Figures showing the classification of manufacturing establishments by type of ownership are available from 1946, although the figures for that year are not strictly comparable with those for succeeding years owing to the later inclusion of the fish curing and packing industry.

Of the 37,929 establishments operating in 1952, 1,405 in the periodical publishing industry were unclassifiable, leaving 36,524 establishments in the four categories of ownership shown in Table 14. Individual ownership numbered 16,388 establishments, partnerships 5,633, incorporated companies 13,491 and co-operatives 1,012. These figures compare with 15,925, 5,531, 13,166 and 1,045 establishments, respectively, in 1951, with 1,354 in the periodical publishing industry being unclassifiable. Table 14 gives the percentage distribution of the four categories of ownership for the years 1946-52.

As is to be expected, the smaller establishments, regardless of type of products manufactured, are usually carried on under individual ownership. In that category, industries conducted on a small scale contain a large number of establishments, the percentage decreasing as the scale of operation increases, as the following figures for 1951 and 1952 show:—

Group	*1951*		*1952*	
	Average Number of Employees per Establishment	*Percentage of Individual Ownership Establishments to the Total*	*Average Number of Employees per Establishment*	*Percentage of Individual Ownership Establishments to the Total*
Wood products	11·0	61·3	10·4	62·0
Printing, publishing and allied trades	16·1	46·5	15·6	46·1
Food and beverages	20·6	47·9	21·2	47·7
Miscellaneous manufacturing industries	24·5	33·2	22·7	36·5
Non-metallic mineral products	30·3	33·2	29·7	33·7
Clothing (textile and fur)	37·5	27·6	38·7	26·4
Chemicals and allied products	44·0	15·8	44·4	16·8
Leather products	44·4	31·2	45·8	30·2
Iron and steel products	75·3	25·6	72·1	26·2
Textiles (except clothing)	91·6	27·6	79·2	29·0
Non-ferrous metal products	93·5	28·4	92·3	27·5
Tobacco and tobacco products	158·5	40·3	152·1	37·7
Paper products	151·5	10·1	152·8	8·8
Products of petroleum and coal	190·2	2·4	167·4	3·0
Electrical apparatus and supplies	181·3	12·3	172·6	12·0
Transportation equipment	204·5	32·4	237·2	28·4
Rubber products	344·1	9·0	308·3	10·0
ALL GROUPS	34·0	44·6	34·0	43·2

14.—Percentage Distribution of Establishments in Manufacturing Industries,[1] classified by Type of Ownership, by Province and Industrial Group, 1951 and 1952, with Totals for 1946-52.

Year and Province	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1946 (estimated)	47·3	16·0	33·4	3·3	100·0
1947	46·4	16·1	34·3	3·2	100·0
1948	46·2	16·4	34·4	3·0	100·0
1949	46·0	15·8	35·3	2·9	100·0
1950	45·6	15·0	36·3	3·1	100·0
1951					
PROVINCE—					
Newfoundland	49·5	34·0	16·3	0·2	100·0
Prince Edward Island	47·2	19·6	26·0	7·2	100·0
Nova Scotia	51·5	16·5	29·8	2·2	100·0
New Brunswick	53·7	12·0	31·0	3·3	100·0
Quebec	49·9	11·3	34·5	4·3	100·0
Ontario	39·1	16·1	42·5	2·3	100·0
Manitoba	40·3	15·8	42·0	1·9	100·0
Saskatchewan	57·5	15·8	21·2	5·5	100·0
Alberta	52·2	20·4	24·4	3·0	100·0
British Columbia	34·7	20·1	43·9	1·3	100·0
Yukon and Northwest Territories	61·1	11·1	27·8	—	100·0
Canada, 1951	**44·6**	**15·5**	**36·9**	**3·0**	**100·0**

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[1] Four main categories of ownership only; the non-classifiable group is not included.

14.—Percentage Distribution of Establishments in Manufacturing Industries,[1] classified by Type of Ownership, by Province and Industrial Group, 1951 and 1952, with Totals for 1946-52—concluded.

Year, Province and Industrial Group	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1951—concluded					
Industrial Group—					
Food and beverages	47·9	11·4	28·9	11·8	100·0
Tobacco and tobacco products	40·3	3·2	51·6	4·9	100·0
Rubber products	9·0	9·0	82·0	—	100·0
Leather products	31·2	12·8	56·0	—	100·0
Textile products (except clothing)	27·6	13·5	58·7	0·2	100·0
Clothing (textile and fur)	27·6	19·2	53·2	—	100·0
Wood products	61·3	19·7	18·7	0·3	100·0
Paper products	10·1	4·2	85·7	—	100·0
Printing, publishing and allied industries	46·5	16·2	36·9	0·4	100·0
Iron and steel products	25·6	14·7	59·7	—	100·0
Transportation equipment	32·4	14·0	53·6	—	100·0
Non-ferrous metal products	28·4	13·2	58·4	—	100·0
Electrical apparatus and supplies	12·3	7·0	80·7	—	100·0
Non-metallic mineral products	33·2	17·2	49·6	—	100·0
Products of petroleum and coal	2·4	1·2	94·0	2·4	100·0
Chemicals and allied products	15·8	5·7	78·1	0·4	100·0
Miscellaneous manufacturing industries	33·2	14·7	51·8	0·3	100·0
1952					
Province—					
Newfoundland	51·2	34·1	14·5	0·2	100·0
Prince Edward Island	47·5	19·0	25·8	7·7	100·0
Nova Scotia	54·1	15·2	28·7	2·0	100·0
New Brunswick	54·0	12·2	30·8	3·0	100·0
Quebec	49·8	11·2	34·9	4·1	100·0
Ontario	39·0	15·8	43·1	2·1	100·0
Manitoba	40·3	16·1	42·0	1·6	100·0
Saskatchewan	57·7	16·0	21·2	5·1	100·0
Alberta	51·7	19·7	25·8	2·8	100·0
British Columbia	36·6	20·1	41·9	1·4	100·0
Yukon and Northwest Territories	47·8	8·7	43·5	—	100·0
Canada, 1952	**44·9**	**15·4**	**36·9**	**2·8**	**100·0**
Industrial Group—					
Food and beverages	47·7	11·5	29·3	11·5	100·0
Tobacco and tobacco products	37·7	3·3	54·1	4·9	100·0
Rubber products	10·0	7·1	82·9	—	100·0
Leather products	30·3	13·1	56·6	—	100·0
Textile products (except clothing)	29·0	12·4	58·6	—	100·0
Clothing (textile and fur)	26·4	19·3	54·3	—	100·0
Wood products	62·0	19·7	18·1	0·2	100·0
Paper products	8·8	3·5	87·7	—	100·0
Printing, publishing and allied industries	46·1	16·0	37·5	0·4	100·0
Iron and steel products	26·2	14·2	59·3	0·3	100·0
Transportation equipment	31·6	12·6	55·8	—	100·0
Non-ferrous metal products	27·5	12·9	59·6	—	100·0
Electrical apparatus and supplies	12·0	6·2	81·8	—	100·0
Non-metallic mineral products	33·7	16·5	49·8	—	100·0
Products of petroleum and coal	3·0	2·0	93·0	2·0	100·0
Chemical products	16·8	6·2	76·6	0·4	100·0
Miscellaneous manufacturing industries	36·5	13·9	49·4	0·2	100·0

[1] Four main categories of ownership only; the non-classifiable group is not included.

On the basis of employment provided, incorporated companies are by a very wide margin the most important factor in the employment field and establishments operating under individual ownership are not as important as their large numbers would seem to indicate.

15.—Percentage Distribution of Employment in the Manufacturing Industries,[1] classified by Type of Ownership, by Province and Industrial Group, 1951 and 1952, with Totals for 1946-52.

Year, Province and Industrial Group	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
	p.c.	p.c.	p.c.	p.c.	p.c.
1946 (estimated)	7·9	4·7	86·5	0·9	100·0
1947	7·5	4·5	87·0	1·0	100·0
1948	7·1	4·4	87·5	1·0	100·0
1949	6·8	4·2	88·0	1·0	100·0
1950	6·3	3·9	88·8	1·0	100·0
1951					
PROVINCE—					
Newfoundland	8·8	7·3	83·9	—	100·0
Prince Edward Island	20·5	13·1	61·4	5·0	100·0
Nova Scotia	10·8	4·3	83·6	1·3	100·0
New Brunswick	10·4	3·6	84·3	1·7	100·0
Quebec	7·6	3·6	88·0	0·8	100·0
Ontario	4·1	3·1	92·4	0·4	100·0
Manitoba	5·7	4·3	88·7	1·3	100·0
Saskatchewan	13·3	6·3	69·7	10·7	100·0
Alberta	13·5	8·1	75·8	2·6	100·0
British Columbia	5·9	5·0	87·0	2·1	100·0
Yukon and Northwest Territories	25·7	6·6	67·7	—	100·0
Canada, 1951	**6·1**	**3·7**	**89·3**	**0·9**	**100·0**
INDUSTRIAL GROUP—					
Food and beverages	10·5	4·0	80·5	5·0	100·0
Tobacco and tobacco products	1·3	0·4	95·6	2·7	100·0
Rubber products	0·2	0·4	99·4	—	100·0
Leather products	7·2	5·6	87·2	—	100·0
Textile products (except clothing)	2·5	1·8	95·7	—	100·0
Clothing (textile and fur)	8·8	9·5	81·7	—	100·0
Wood products	20·4	10·3	69·0	0·3	100·0
Paper products	0·6	0·3	99·1	—	100·0
Printing, publishing and allied industries	9·2	5·1	84·5	1·2	100·0
Iron and steel products	2·3	2·0	95·7	—	100·0
Transportation equipment	0·7	0·5	98·8	—	100·0
Non-ferrous metal products	2·2	1·4	96·4	—	100·0
Electrical apparatus and supplies	0·6	0·6	98·8	—	100·0
Non-metallic mineral products	5·5	4·1	90·4	—	100·0
Products of petroleum and coal	—	—	98·9	1·1	100·0
Chemical products	1·1	0·5	98·0	0·4	100·0
Miscellaneous manufacturing industries	8·1	4·8	86·8	0·3	100·0
1952					
PROVINCE—					
Newfoundland	9·4	8·0	82·6	--	100·0
Prince Edward Island	19·6	11·5	64·0	4·9	100·0
Nova Scotia	10·2	3·8	84·7	1·3	100·0
New Brunswick	10·3	3·4	84·6	1·7	100·0
Quebec	7·3	3·6	88·3	0·8	100·0
Ontario	4·0	3·0	92·6	0·4	100·0
Manitoba	5·4	4·5	89·0	1·1	100·0
Saskatchewan	13·0	6·2	70·2	10·6	100·0
Alberta	12·3	7·3	78·2	2·2	100·0
British Columbia	5·9	5·3	86·7	2·1	100·0
Yukon and Northwest Territories	19·5	3·1	77·4	—	100·0
Canada, 1952	**5·9**	**3·6**	**89·6**	**0·9**	**100·0**

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[1] Four main categories of ownership only; the non-classifiable group is not included.

15.—Percentage Distribution of Employment in the Manufacturing Industries,[1] classified by Type of Ownership, by Province and Industrial Group, 1951 and 1952, with Totals for 1946-1952—concluded.

Year and Industrial Group	Individual Ownership	Partner-ships	Incor-porated Companies	Co-opera-tives	Total
1952—concluded	p.c.	p.c.	p.c.	p.c.	p.c.
INDUSTRIAL GROUP—					
Food and beverages	10·4	4·2	80·4	5·0	100·0
Tobacco and tobacco products	1·2	0·4	95·7	2·7	100·0
Rubber products	0·2	0·5	99·3	—	100·0
Leather products	7·0	5·6	87·4	—	100·0
Textile products (except clothing)	2·7	2·0	95·3	- -	100·0
Clothing (textile and fur)	8·1	9·2	82·7	—	100·0
Wood products	20·7	10·5	68·4	0·4	100·0
Paper products	0·5	0·3	99·2	—	100·0
Printing, publishing and allied industries	8·9	4·8	85·1	1·2	100·0
Iron and steel products	2·4	1·9	95·6	0·1	100·0
Transportation equipment	0·5	0·4	99·1	—	100·0
Non-ferrous metal products	1·9	1·5	96·6	—	100·0
Electrical apparatus and supplies	0·4	0·5	99·1	—	100·0
Non-metallic mineral products	5·5	4·0	90·5	—	100·0
Products of petroleum and coal	- -	- -	99·0	1·0	100·0
Chemicals and allied products	1·2	0·6	97·9	0·3	100·0
Miscellaneous manufacturing industries	8·6	4·9	86·3	0·2	100·0

[1] Four main categories of ownership only; the non-classifiable group is not included.

16.—Percentage Distribution of Employment in the Forty Leading Industries, by Type of Ownership, 1951 and 1952

	Year and Industry	Individual Ownership	Partner-ships	Incor-porated Companies	Co-opera-tives	Total
		p.c.	p.c.	p.c.	p.c.	p.c.
	1951					
1	Pulp and paper	—	—	100·0	—	100·0
2	Slaughtering and meat packing	2·0	1·5	93·6	2·9	100·0
3	Non-ferrous metal smelting and refining	—	—	100·0	—	100·0
4	Motor-vehicles	—	—	100·0	—	100·0
5	Petroleum products	—	—	98·5	1·5	100·0
6	Sawmills	29·8	13·3	56·5	0·4	100·0
7	Primary iron and steel	—	—	100·0	—	100·0
8	Butter and cheese	11·8	3·9	62·1	22·2	100·0
9	Rubber goods, including footwear	0·2	0·4	99·4	—	100·0
10	Railway rolling-stock	—	—	100·0	—	100·0
11	Flour mills	1·2	3·4	93·6	1·8	100·0
12	Cotton yarn and cloth	—	—	100·0	—	100·0
13	Motor-vehicle parts	1·4	0·9	97·7	—	100·0
14	Miscellaneous food preparations	4·7	2·8	92·5	—	100·0
15	Bread and other bakery products	27·2	7·5	64·9	0·4	100·0
16	Clothing, men's factory	5·9	8·9	85·2	—	100·0
17	Machinery, heavy electrical	0·1	—	99·9	—	100·0
18	Electrical apparatus and supplies, miscellaneous	0·4	0·7	98·9	—	100·0
19	Machinery, industrial	1·8	1·4	96·8	—	100·0
20	Fruit and vegetable preparations	4·6	3·3	88·7	3·4	100·0
21	Clothing, women's factory	8·4	9·9	81·7	—	100·0
22	Sheet metal products	2·8	2·3	94·9	—	100·0
23	Printing and publishing	6·2	2·8	89·8	1·2	100·0
24	Furniture	11·6	9·4	79·0	—	100·0
25	Brass and copper products	2·2	1·6	96·2	—	100·0
26	Sash, door and planing mills	18·0	8·6	73·1	0·3	100·0
27	Feeds, stock and poultry, prepared	16·4	7·6	58·4	17·6	100·0
28	Boxes and bags, paper	1·6	0·8	97·6	—	100·0
29	Agricultural implements	0·5	0·9	97·6	1·0	100·0
30	Synthetic textiles and silk	0·3	0·2	99·5	—	100·0
31	Castings, iron	2·9	2·9	94·2	—	100·0
32	Fish processing	9·4	2·8	79·9	7·9	100·0
33	Breweries	—	0·4	99·6	—	100·0
34	Printing and bookbinding	14·8	8·2	75·3	1·7	100·0
35	Sugar refining	—	—	100·0	—	100·0
36	Miscellaneous paper goods	2·4	1·0	96·6	—	100·0
37	Miscellaneous chemical products	1·5	0·5	98·0	—	100·0
38	Footwear, leather	6·5	4·0	89·5	—	100·0
39	Acids, alkalies and salts	—	—	100·0	—	100·0
40	Aircraft and parts	—	—	100·0	—	100·0

16.—Percentage Distribution of Employment in the Forty Leading Industries, by Type of Ownership, 1951 and 1952—concluded

	Year and Industry	Individual Ownership	Partnerships	Incorporated Companies	Co-operatives	Total
		p.c.	p.c.	p.c.	p.c.	p.c.
	1952					
1	Pulp and paper mills	—	0·1	99·9	—	100·0
2	Slaughtering and meat packing	1·5	1·7	94·7	2·1	100·0
3	Non-ferrous metal smelting and refining	—	—	100·0	—	100·0
4	Motor-vehicles	—	—	100·0	—	100·0
5	Petroleum products	--	--	98·5	1·5	100·0
6	Sawmills	30·6	13·8	55·2	0·4	100·0
7	Primary iron and steel	—	—	100·0	—	100·0
8	Butter and cheese	10·8	4·8	61·7	22·7	100·0
9	Railway rolling-stock	—	--	100·0	—	100·0
10	Rubber goods, including footwear	0·2	0·5	99·3	—	100·0
11	Clothing, men's factory	5·6	8·5	85·9	—	100·0
12	Motor-vehicle' parts	1·0	0·9	98·1	—	100·0
13	Flour mills	1·2	3·1	94·0	1·7	100·0
14	Miscellaneous food preparations	4·4	2·4	93·2	—	100·0
15	Bread and other bakery products	27·2	7·8	64·5	0·5	100·0
16	Aircraft and parts	0·1	--	99·9	—	100·0
17	Machinery, heavy electrical	--	--	100·0	—	100·0
18	Machinery, industrial	1·8	1·5	96·4	0·3	100·0
19	Cotton yarn and cloth	--	--	100·0	—	100·0
20	Electrical apparatus and supplies, misc.	0·3	0·6	99·1	—	100·0
21	Printing and publishing	5·5	2·2	91·1	1·2	100·0
22	Clothing, women's factory	7·1	9·4	83·5	—	100·0
23	Sheet metal products	2·5	2·1	95·4	—	100·0
24	Fruit and vegetable preparations	5·3	4·0	87·4	3·3	100·0
25	Agricultural implements	0·7	0·6	97·9	0·8	100·0
26	Furniture	12·6	10·3	77·1	—	100·0
27	Sash, door and planing mills	16·6	8·3	74·8	0·3	100·0
28	Brass and copper products	1·9	1·5	96·6	—	100·0
29	Feeds, stock and poultry, prepared	16·3	7·0	57·9	18·8	100·0
30	Breweries	—	0·4	99·6	—	100·0
31	Boxes and bags, paper	1·6	0·8	97·6	—	100·0
32	Castings, iron	3·6	2·2	94·2	—	100·0
33	Printing and bookbinding	14·9	8·1	75·2	1·8	100·0
34	Shipbuilding	0·3	0·2	99·5	—	100·0
35	Synthetic textiles and silk	0·2	—	99·8	—	100·0
36	Miscellaneous chemical products	1·4	0·5	98·1	—	100·0
37	Bridge and structural steel	0·1	0·1	99·8	—	100·0
38	Tobacco, cigars and cigarettes	1·4	0·5	98·1	—	100·0
39	Miscellaneous paper products	2·2	0·9	96·9	—	100·0
40	Fish processing	10·6	3·4	77·5	8·5	100·0

Subsection 4.—Leading Manufacturing Industries

The rank of the ten leading industries in 1952, from the standpoint of gross value of production, is compared with their respective ranks in significant years since 1922 in the following statement:—

Industry	*Rank in—* *1922*	*1929*	*1933*	*1939*	*1944*	*1949*	*1950*	*1951*	*1952*
Pulp and paper	2	1	1	2	5	1	1	1	1
Slaughtering and meat packing	3	2	3	3	1	2	2	2	2
Non-ferrous metal smelting and refining	[1]	9	2	1	2	3	4	3	3
Motor-vehicles	6	4	11	5	7	4	3	4	4
Petroleum products	9	10	6	6	14	5	5	5	5
Sawmills	4	5	14	8	11	6	6	6	6
Primary iron and steel	20	16	31	11	13	8	7	7	7
Butter and cheese	5	6	5	4	10	7	8	8	8
Railway rolling-stock	24	7	23	16	16	9	16	10	9
Rubber goods, including footwear	21	11	4	14	15	15	11	9	10

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[1] Did not rank among the forty leading industries in 1922.

The depression of the 1930's resulted in a rearrangement in the ranking of many industries which for some proved to be temporary. Also, during World War II the industries engaged in producing war equipment, such as shipbuilding, aircraft, automobiles and miscellaneous chemical products, advanced to higher positions but when the War ended industries engaged in the production of consumer goods again advanced their positions. Pulp and paper, after a lapse of a number of years, resumed its premier place in 1948. In 1952, the first eight industries retained their 1951 ranking, but railway rolling-stock and rubber goods, including footwear, exchanged positions to become ninth and tenth respectively.

17.—Principal Statistics of the Forty Leading Industries, ranked according to Value of Factory Shipments, 1952

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
		No.	No.	$	$	$	$
1	Pulp and paper	128	57,803	225,353,327	497,046,828	584,101,072	1,157,887,657
2	Slaughtering and meat packing	154	22,864	71,378,013	700,369,951	158,761,279	863,776,155
3	Non-ferrous metal smelting and refining	17	24,608	87,964,295	519,781,231	266,721,382	837,074,065
4	Motor-vehicles	19	31,102	113,607,071	497,474,097	267,099,575	767,354,984
5	Petroleum products	55	11,661	46,145,422	453,954,688	178,523,582	660,356,584
6	Sawmills	8,283	60,931	135,540,707	299,506,832	261,325,619	568,023,148
7	Primary iron and steel	58	35,001	124,387,290	239,001,158	233,577,318	504,000,394
8	Butter and cheese	1,602	20,435	48,826,388	281,366,628	90,409,864	378,794,866
9	Railway rolling-stock	36	36,084	108,318,766	181,620,234	145.760,789	332,164,783
10	Rubber goods, including footwear	70	21,582	65,477,683	120,799,295	162,493,060	286,654,629
11	Clothing, men's factory	587	35,583	70,782,226	151,357,963	125,282,646	277,426,014
12	Motor-vehicle parts	172	21,791	72,607,789	145,666,823	127,222,358	276,785,167
13	Flour mills	99	4,961	14,688,635	236,194,234	36,360,848	274,208,040
14	Miscellaneous food preparations	325	9,563	23,203,080	190,029,289	73,007,555	266,030,492
15	Bread and other bakery products	2,585	33,011	74,244,786	122,229,789	129,740,849	260,181,410
16	Aircraft and parts	38	33,356	108,667,004	115,286,096	127,296,867	244,607,320
17	Machinery, heavy electrical	52	25,796	86,853,545	90,300,105	144,997,030	237,312,982
18	Machinery, industrial	317	22,497	73,820,422	81,396,443	143,291,450	227,025,874
19	Cotton yarn and cloth	57	22,969	53,705,770	143,584,722	78,954,978	226,492,425
20	Electrical apparatus and supplies, miscellaneous	146	21,404	66,260,192	94,322,365	122,226,955	218,640,810
21	Printing and publishing	805	27,873	84,912,779	61,789,469	154,760,420	218,523,462
22	Clothing, women's factory	853	28,433	60,193,172	113,479,386	103,426,871	217,441,071
23	Sheet metal products	304	17,341	52,568,840	115,072,180	96,233,575	213,585,114
24	Fruit and vegetable preparations	462	16,020	31,992,856	120,602,514	88,490,233	211,787,559
25	Agricultural implements	85	18,046	62,423,716	109,827,515	93,778,210	205,775,487
26	Furniture	1,557	27,188	65,889,501	96,063,263	106,056,991	204,265,922
27	Sash, door and planing mills	1,728	19,525	43,986,907	116,980,088	71,918,158	191,451,085
28	Brass and copper products	153	9,711	31,034,274	121,374,319	61,126,829	184,671,951
29	Feeds, stock and poultry, prepared	671	5,938	13,392,352	148,801,788	29,967,343	181,080,732
30	Breweries	61	8,163	30,143,552	49,713,488	126,465,413	178,768,806
31	Boxes and bags, paper	185	13,074	34,440,614	102,604,735	68,368,996	172,150,881
32	Castings, iron	203	15,937	51,142,241	78,461,149	89,181,703	170,968,719
33	Printing and bookbinding	1,669	22,898	61,776,455	56,570,169	102,375,524	160,278,195
34	Shipbuilding	74	20,676	61,700,312	60,247,318	96,737,673	159,057,949
35	Synthetic textiles and silk	48	15,723	42,708,505	63,780,047	90,004,216	157,628,515
36	Miscellaneous chemical products	239	11,397	33,694,741	64,886.257	72,735,923	143,546,514
37	Bridge building and structural steel	38	10,824	37,418,880	62,135,893	76,308,313	139,716,836
38	Tobacco, cigars and cigarettes	47	7,587	22,036,719	73,168,064	64,864,521	138,423,959
39	Miscellaneous paper goods	204	9,794	26,152,565	75,204,453	61,926,359	138,296,515
40	Fish processing	635	14,354	24,426,351	86,457,993	45,734,589	134,725,304
	Totals, Leading Industries	**24,821**	**873,504**	**2,543,867,743**	**6,938,508,859**	**5,157,616,936**	**12,386,942,375**
	Totals, All Industries	**37,929**	**1,288,382**	**3,637,620,160**	**9,146,172,494**	**7,443,533,199**	**16,982,687,035**
	Percentages of leading industries to all industries	65·4	67·8	69·9	75·8	69·3	73·8

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[1] In 1952, value of factory shipments replaced gross value of products collected for previous years; *see* text on p. 633.

Section 3.—Principal Factors in Manufacturing Production

Subsection 1.—Salaries and Wages in Manufacturing Industries

Statistics of earnings and hours of work of wage-earners and salaried employees in manufacturing will be found in Chapter XVIII on Labour.

In 1952, the 37,929 manufacturing establishments employed 263,027 salaried employees and 1,025,355 wage-earners, a total of 1,288,382 persons. Out of every 1,000 persons employed in these industries, 204 were classed as salary-earners and 796 as wage-earners; the former earned 25 p.c. and the latter 75 p.c. of the total amount paid out as remuneration for services. It is interesting to note the reduction in the disparity between average annual salaries and wages that has taken place in recent years. Whereas, in 1939, average annual wages were only 56 p.c. of average annual salaries, in 1943 the percentage rose to 76, declined to 69 in 1947 and increased to 75 in 1952. The average salary in 1952 amounted to $3,513, which was 101 p.c. higher than in 1939, and the average wage was $2,647, 171 p.c. higher than in 1939.

18.—Total and Average Annual Salaries and Wages Paid in Manufacturing Industries, Significant Years, 1917-52

NOTE.—The averages of wage-earners and earnings for the years 1933-45 are strictly comparable with those for the years up to 1924 but not with those for the intervening years. The figures for the latest years —as for the earlier—represent the earnings for complete man-years of work, with no allowance for periods of unemployment. The difference amounts to about 3 or 4 p.c. in the total figures and affects chiefly the seasonal industries.

Year	Annual Salaries				Annual Wages			
	Salaried Employees		Total Salaries	Average Salaries	Wage-Earners		Total Wages	Average Wages
	Male	Female			Male	Female		
	No.	No.	$	$	No.	No.	$	$
1917.........	64,918		85,353,667	1,315	541,605		412,448,177	762
1920.........	78,334		141,837,361	1,811	520,559		575,656,515	1,106
1922.........	71,586		129,836,831	1,814	384,670		359,560,399	935
1924.........	54,379	15,641	130,344,822	1,862	322,719	94,871	404,122,853	968
1926.........	58,245	17,092	142,353,900	1,890	374,244	109,580	483,328,342	999
1929.........	67,731	21,110	175,553,710	1,976	454,768	122,922	601,737,507	1,042
1933.........	67,875	18,761	139,317,946	1,608	287,266	94,756	296,929,878	777
1939.........	98,165	26,607	217,839,334	1,746	415,488	117,854	519,971,819	975
1944.........	126,858	65,700	418,065,594	2,171	744,635	285,689	1,611,555,776	1,564
1945.........	128,601	62,106	417,857,619	2,191	680,620	248,045	1,427,915,830	1,538
1946.........	127,002	54,004	410,875,776	2,270	662,699	214,451	1,329,811,478	1,516
1947.........	135,248	55,852	474,693,800	2,484	721,407	219,243	1,611,232,166	1,713
1948.........	141,038[r]	57,192[r]	532,594,959[r]	2,687	738,721[r]	218,770[r]	1,876,773,231[r]	1,960
1949.........	157,516	64,035	628,427,937	2,836	732,457	217,199	1,963,462,720	2,067
1950.........	164,475	66,578	692,633,349	2,998	736,477	215,767	2,078,634,086	2,183
1951.........	176,943	70,844	816,714,604	3,296	792,394	218,194	2,459,566,313	2,434
1952.........	188,235	74,792	923,905,251	3,513	810,060	215,295	2,713,714,909	2,647

Ontario has a larger proportion of females among its salaried employees than any of the other provinces. This situation prevails in Quebec with regard to wage-earners owing, no doubt, to the textile industries of the Province. The importance of the textile industries in providing employment for females is strikingly illustrated by the fact that, of all female wage-earners engaged in the manufacturing industries of Canada in 1952, 43 p.c. were classed in the textile and clothing groups.

The average salary in 1952 was $3,513, more than double the average in 1939. Salaried employees in Ontario were the highest paid, those in Quebec second, followed by British Columbia and Manitoba. The location of head offices of many large corporations at Toronto, Montreal, Vancouver and Winnipeg tends to raise the average salaries in the provinces in which these cities are located.

The average wage in 1952 was $2,647 as compared with $975 in 1939. The manufacturing industries of British Columbia paid the highest average wage among the provinces. Ontario was second, followed by Saskatchewan, Alberta and Newfoundland. The high figures shown for the Yukon and Northwest Territories in this respect reflect the unusual conditions under which industry is carried on in those regions and are not representative. Statistics of the distribution of employees by province and by industrial group, together with average annual earnings, are given for 1951 and 1952 in Table **19**.

19.—Employees and Annual Salaries and Wages Paid in Manufacturing Industries, by Province and Industrial Group, 1951 and 1952

Year, Province and Industrial Group	Annual Salaries				Annual Wages			
	Salaried Employees		Total Salaries	Average Salaries	Wage-Earners		Total Wages	Average Wages
	Male	Female			Male	Female		
	No.	No.	$	$	No.	No.	$	$
1951								
PROVINCE—								
Newfoundland	1.697	298	4,757,011	2,384	6,488	1,139	17,924,235	2,350
Prince Edward Island	362	92	778,604	1,715	906	375	1,680,949	1,312
Nova Scotia	3,662	1,004	11,664,070	2,500	22,446	3,400	52,311,684	2,024
New Brunswick	2,709	880	9,893,725	2,757	17,296	3,620	43,653,157	2,087
Quebec	57,222	21,843	256,228,103	3,241	245,869	92,248	749,373,577	2,216
Ontario	85,433	38,404	432,056,989	3,489	378,862	96,734	1,237,329,993	2,602
Manitoba	5,709	2,072	23,729,367	3,050	25,992	7,686	76,441,599	2,270
Saskatchewan	2,183	813	7,322,831	2,444	7,050	977	18,967,463	2,363
Alberta	5,001	1.457	16,521,056	2,558	19,556	3,091	52,614,531	2,323
British Columbia	12,939	3,971	53,668,749	3,174	67,826	8,911	208,957,534	2,723
Yukon and Northwest Territories	26	10	94,099	2,614	103	13	311,591	2,686
Canada, 1951	**176,943**	**70,844**	**816,714,604**	**3,296**	**792,394**	**218,194**	**2,459,566,313**	**2,434**
INDUSTRIAL GROUP—								
Food and beverages	24,423	9,803	100,673,433	2,941	103,254	35,013	292,186,002	2,113
Tobacco and tobacco products	943	533	5,408,847	3,665	3,317	5,033	19,029,371	2,279
Rubber products	3,762	1,524	17,767,922	3,361	13,585	4,183	46,589,774	2,622
Leather products	2,917	1,188	13,398,095	3,264	16,077	11,396	46,270,669	1,684
Textile products (except clothing)	7,360	3,748	40,597,090	3,655	44,402	26,200	144,433,399	2,046
Clothing (textile and fur)	9,759	6,066	53,405,045	3,375	30,972	68,936	168,959,902	1,691
Wood products	20,208	3,030	52,278,571	2,250	102,972	5,068	230,783,503	2,136
Paper products	10,213	3,902	61,238,472	4,338	60,115	8,659	215,282,534	3,130
Printing, publishing and allied industries	15,005	9,269	66,737,821	2,749	31,469	8,951	104,090,909	2,575
Iron and steel products	25,691	9,106	126,490,198	3,635	140,730	7,796	420,824,417	2,833
Transportation equipment	14,913	4,562	72,702,273	3,733	99,461	3,581	295,404,160	2,867
Non-ferrous metal products	7,186	2,684	35,379,886	3,585	36,923	3,321	115,353,818	2,866
Electrical apparatus and supplies	12,401	5,164	60,924,133	3,468	36,435	13,626	133,824,905	2,673
Non - metallic mineral products	3,904	1,390	17,453,958	3,297	24,176	2,052	68,625,014	2,616
Products of petroleum and coal	3,820	1,234	18,506,609	3,662	10,473	71	33,441,281	3,172
Chemicals and allied products	10,282	5,395	52,970,452	3,379	24,477	5,510	78,339,699	2,612
Miscellaneous manufacturing industries	4,156	2,246	20,781,799	3,246	13,556	8,798	46,126,956	2,063

19.—Employees and Annual Salaries and Wages Paid in Manufacturing Industries, by Province and Industrial Group, 1951 and 1952—concluded

Year, Province and Industrial Group	Annual Salaries				Annual Wages			
	Salaried Employees		Total Salaries	Average Salaries	Wage-Earners		Total Wages	Average Wages
	Male	Female			Male	Female		
	No.	No.	$	$	No.	No.	$	$
1952								
Province—								
Newfoundland	1,985	340	5,452,693	2,345	6,976	1,002	19,781,158	2,479
Prince Edward Island	343	84	814,983	1,909	974	394	1,990,639	1,455
Nova Scotia	3,755	1,101	12,884,551	2,653	24,768	3,747	62,360,836	2,187
New Brunswick	2,756	921	10,699,990	2,910	17,097	3,477	45,278,472	2,201
Quebec	60,365	23,019	290,383,844	3,482	253,334	92,980	835,560,859	2,413
Ontario	91,717	40,644	488,513,049	3,691	384,448	92,887	1,355,673,356	2,840
Manitoba	5,818	2,202	25,815,971	3,219	27,387	7,958	86,331,601	2,443
Saskatchewan	2,285	844	8,152,103	2,605	7,163	1,015	21,337,759	2,609
Alberta	5,275	1,609	19,880,392	2,888	21,487	3,394	62,646,802	2,518
British Columbia	13,903	4,020	61,191,597	3,414	66,315	8,429	222,339,379	2,975
Yukon and Northwest Territories	33	8	116,078	2,831	111	12	414,048	3,366
Canada, 1952	**188,235**	**74,792**	**923,905,251**	**3,513**	**810,060**	**215,295**	**2,713,714,909**	**2,647**
Industrial Group—								
Food and beverages	24,663	10,216	108,239,778	3,103	104,881	35,792	321,410,277	2,285
Tobacco and tobacco products	907	508	5,549,328	3,922	3,111	4,751	19,855,744	2,526
Rubber products	3,884	1,438	19,007,855	3,572	12,357	3,903	46,469,828	2,858
Leather products	2,998	1,310	14,631,149	3,396	15,843	11,952	51,522,341	1,854
Textile products (except clothing)	7,657	3,851	42,574,356	3,700	38,613	22,618	136,115,110	2,223
Clothing (textile and fur)	9,630	6,014	55,701,719	3,561	31,260	70,764	184,837,953	1,812
Wood products	21,156	3,175	57,563,254	2,366	100,973	5,164	241,867,727	2,279
Paper products	10,561	4,075	67,584,381	4,618	60,238	8,091	225,097,902	3,294
Printing, publishing and allied industries	15,219	9,372	73,846,566	3,003	31,312	8,582	112,404,149	2,818
Iron and steel products	27,693	9,639	144,825,158	3,879	144,788	7,071	472,185,766	3,109
Transportation equipment	18,863	5,906	96,831,129	3,909	117,358	4,233	376,287,321	3,095
Non-ferrous metal products	7,534	2,674	39,508,846	3,870	37,463	3,267	127,536,238	3,131
Electrical apparatus and supplies	13,823	5,696	72,039,772	3,691	36,896	12,785	145,525,164	2,929
Non-metallic mineral products	3,871	1,380	18,437,688	3,511	24,211	1,960	74,381,231	2,842
Products of petroleum and coal	4,222	1,403	23,018,760	4,092	11,197	83	40,554,413	3,595
Chemicals and allied products	10,842	5,709	60,021,601	3,626	25,508	5,635	88,054,074	2,827
Miscellaneous manufacturing industries	4,712	2,426	24,523,911	3,436	14,051	8,644	49,609,671	2,186

Average Annual Earnings in the Forty Leading Industries.—In 1952 there were 30 industries with average salaries of $3,500 or over, as compared with 22 industries in this range in 1951. Indicative of the rapidly changing pattern of remuneration in manufacturing is the fact that, in 1945, the last year of the War, no industry paid an average annual salary of over $3,000, the highest being $2,935 reported by the brewing industry. The highest average salary in 1952, amounting to $5,069, was received by office and supervisory employees in the pulp and paper industry. This industry also occupied the premier position in 1951 with $4,688. Other industries paying $4,000 or more were as follows: breweries, $4,891; motor-vehicles, $4,645; bridge building and structural steel, $4,386; primary iron and steel, $4,385; miscellaneous iron and steel products, $4,323; petroleum products, $4,276; boxes and bags, paper, $4,121; boilers, tanks and platework, $4,060; motor-vehicle parts, $4,059; iron castings, $4,023; non-ferrous metal smelting and refining,

$4,007; and brass and copper products, $4,001. In 17 others, salaries were between $3,500 and $4,000, and in the remaining ten they were under $3,000. The sawmill and butter and cheese industries with $1,688 and $2,292, respectively, paid the lowest salaries.

The increase in average wages since 1945 paralleled that of salaries. In 1945 there were only four industries averaging over $2,000 whilst in 1952 there were 36. In 1945 the highest average annual wage was $2,365 paid by the motor-vehicle industry, and in 1952 it was $3,774 paid by the petroleum products industry, which displaced pulp and paper as the leading industry having the highest wage of $3,531 in 1951. The highest wages are usually paid by industries in which the proportion of skilled workers is high and that of female workers is low. There were seven industries in 1952 with average annual wages of $3,300 or over. These were: petroleum products, $3,774; pulp and paper, $3,669; non-ferrous metal smelting and refining, $3,489; primary iron and steel, $3,437; motor-vehicles, $3,419; breweries, $3,388 and agricultural implements, $3,369. In eight industries, average wages ranged between $3,000 and $3,500; in twelve, between $2,500 and $3,000; in nine others, between $2,000 and $2,500, and in the remaining four they were below $2,000. This latter group, which includes fruit and vegetable preparations, leather footwear, men's factory clothing and women's factory clothing, is composed of industries made up of a large number of small establishments and is one in which the proportion of female workers is high. Employment by sex, and average annual earnings in the forty leading industries are given in Table **20**.

20.—Employees and Annual Salaries and Wages Paid in the Forty Leading Industries, 1951 and 1952

NOTE.—Industries ranked according to the aggregate salaries and wages paid.

	Year and Industry	Annual Salaries				Annual Wages			
		Salaried Employees		Total Salaries	Average Salary	Wage-Earners		Total Wages	Average Wage
		Male	Female			Male	Female		
		No.	No.	$	$	No.	No.	$	$
	1951								
1	Pulp and paper	7,174	2,239	44,126,918	4,688	47,164	714	169,042,988	3,531
2	Sawmills	11,395	705	19,507,788	1,612	49,825	490	112,550,819	2,237
3	Primary iron and steel	3,128	978	16,744,000	4,078	28.884	403	91,817,802	3,135
4	Motor-vehicles	4,245	1,413	23,267,271	4,112	24,500	321	78,075,503	3,146
5	Railway rolling-stock	2,154	300	9,228,292	3,761	30,842	114	84,800,542	2,739
6	Printing and publishing	7,792	4,316	33,623,767	2,777	13,162	2,030	42,617,798	2,805
7	Machinery, heavy electrical	4,697	1,773	21,481,397	3,320	14,886	3,940	54,117,515	2,875
8	Non-ferrous metal smelting and refining	3,193	555	13,816,942	3,686	19,005	61	61,657,563	3,234
9	Machinery, industrial	4,477	1,754	22,026,229	3,535	15,595	500	45,260,684	2,812
10	Bread and other bakery products	3,656	1,209	11,920,659	2,450	20,773	6,614	55,195,260	2,015
11	Motor-vehicle parts	2,390	957	12,855,397	3,841	15,369	2,481	52,427,766	2,937
12	Rubber goods and footwear	3,762	1,524	17,767,922	3,361	13,585	4,183	46,589,774	2,622
13	Clothing, men's factory	2,665	1,500	14,751,945	3,542	8,831	19,736	47,564,221	1,665
14	Slaughtering and meat packing	3,502	1,208	16,824,332	3,572	13,363	2,841	45,284,543	2,795
15	Furniture	3,477	1,086	14,195,631	3,111	20,854	1,857	47,233,644	2,080
16	Electrical apparatus and supplies, misc	3,775	1,628	18,713,133	3,463	11,128	4,726	41,976,958	2,648
17	Aircraft and parts	4,122	1,363	19,417,203	3,540	13,365	348	40,141,114	2,927
18	Cotton yarn and cloth	1,327	916	8,265,512	3,685	16,376	9,013	50,469,321	1,988
19	Printing and bookbinding	3,795	1,729	17,150,131	3,105	12,466	5,223	40,068,214	2,265
20	Clothing, women's factory	2,580	1,689	14,847,672	3,478	6,202	18,217	41,916,610	1,717
21	Agricultural implements	2,482	716	10,727,332	3,354	13,871	167	41,490,098	2,956
22	Castings, iron	1,549	591	8,371,382	3,912	14,977	345	43,757,031	2,856
23	Sheet metal products	2,498	957	12,778,709	3,699	12,211	1,771	36,258,643	2,593
24	Butter and cheese	3,746	1,630	11,665,107	2,170	14,542	982	35,116,443	2,262
25	Synthetic textiles and silk	2,300	978	11,692,668	3,567	10,651	4,068	33,001,070	2,242

20.—Employees and Annual Salaries and Wages Paid in the Forty Leading Industries, 1951 and 1952—continued

	Year and Industry	Annual Salaries				Annual Wages			
		Salaried Employees		Total Salaries	Average Salary	Wage-Earners		Total Wages	Average Wage
		Male	Female			Male	Female		
		No.	No.	$	$	No.	No.	$	$
	1951—concluded								
26	Sash, door and planing mills	3,058	627	9,621,964	2,611	15,502	170	30,838,716	1,968
27	Shipbuilding	1,440	383	6,104,848	3,349	12,927	86	33,999,683	2,613
28	Hardware, tools and cutlery	1,873	941	9,785,622	3,477	9,729	1,746	29,694,712	2,588
29	Petroleum products	2,845	905	14,414,140	3,844	6,799	62	22,664,477	3,303
30	Footwear, leather	1,676	710	7,590,611	3,181	9,750	7,863	28,256,825	1,604
31	Boxes and bags, paper	1,364	704	8,148,190	3,940	6,451	4,865	24,086,979	2,129
32	Fruit and vegetable preparations	1,675	902	7,933,709	3,079	7,270	6,554	22,173,867	1,604
33	Brass and copper products	1,341	568	7,006,881	3,670	7,525	643	22,311,195	2,732
34	Iron and steel products, misc.	1,421	380	6,827,761	3,791	7,880	408	22,349,353	2,697
35	Bridge building and structural steel	1,621	357	8,035,027	4,062	6,578	52	20,243,399	3,053
36	Radios and radio parts	2,225	919	11,876,204	3,777	3,758	3,229	16,391,885	2,346
37	Breweries	1,442	399	8,056,046	4,376	6,504	104	19,433,263	2,941
38	Chemical products, misc.	2,097	858	10,317,357	3,491	5,491	1,291	16,654,156	2,456
39	Wire and wire products	1,174	502	6,341,636	3,784	6,384	799	20,487,617	2,852
40	Machinery, household, office and store	1,252	569	5,901,175	3,241	6,892	1,187	20,214,932	2,502
	Totals, Forty Leading Industries	**122,385**	**43,438**	**553,728,510**	**3,339**	**581,867**	**120,204**	**1,788,232,983**	**2,549**
	Grand Totals, All Industries, 1951	**176,943**	**70,844**	**816,714,604**	**3,296**	**792,394**	**218,194**	**2,459,566,313**	**2,434**
	1952								
1	Pulp and paper	7,256	2,237	48,119,514	5,069	47,575	735	177,233,813	3,669
2	Sawmills	12,068	787	21,693,711	1,688	47,585	491	113,846,996	2,368
3	Primary iron and steel	3,308	1,019	18,972,041	4,385	30,344	330	105,415,249	3,437
4	Motor-vehicles	4,453	1,472	27,518,997	4,645	24,857	320	86,088,074	3,419
5	Aircraft and parts	7,302	2,428	34,533,237	3,549	22,559	1,067	74,133,767	3,138
6	Railway rolling-stock	2,290	346	10,390,581	3,942	33,292	156	97,928,185	2,928
7	Non-ferrous metal smelting and refining	3,468	598	16,290,926	4,007	20,474	68	71,673,369	3,489
8	Machinery, heavy electrical	5,357	2,011	27,582,743	3,744	15,199	3,229	59,270,802	3,216
9	Printing and publishing	7,915	4,502	37,770,291	3,042	13,401	2,055	47,142,488	3,050
10	Bread and other bakery products	3,634	1,212	12,952,387	2,673	21,448	6,717	61,292,399	2,176
11	Machinery, industrial	4,724	1,861	24,238,970	3,681	15,440	472	49,581,452	3,116
12	Motor-vehicle parts	2,581	1,031	14,660,736	4,059	15,819	2,360	57,947,053	3,188
13	Slaughtering and meat packing	3,552	1,246	17,695,965	3,688	14,856	3,210	53,682,048	2,971
14	Clothing, men's factory	2,750	1,576	15,984,766	3,695	9,687	21,570	54,797,460	1,753
15	Miscellaneous electrical apparatus and supplies	3,984	1,808	21,545,991	3,720	11,319	4,293	44,714,201	2,864
16	Furniture	3,611	1,121	15,672,421	3,312	20,609	1,847	50,217,080	2,236
17	Rubber goods, including footwear	3,884	1,438	19,007,855	3,572	12,357	3,903	46,469,828	2,858
18	Agricultural implements	2,544	749	12,720,196	3,863	14,566	187	49,703,520	3,369
19	Printing and bookbinding	3,888	1,799	18,995,283	3,340	12,258	4,953	42,781,172	2,486
20	Shipbuilding	1,677	482	7,849,545	3,636	18,424	93	53,850,767	2,908
21	Clothing, women's factory	2,358	1,650	14,656,246	3,657	5,998	18,427	45,536,926	1,864

20.—Employees and Annual Salaries and Wages Paid in the Forty Leading Industries, 1951 and 1952—concluded

	Year and Industry	Annual Salaries				Annual Wages			
		Salaried Employees		Total Salaries	Average Salary	Wage-Earners		Total Wages	Average Wage
		Male	Female			Male	Female		
		No.	No.	$	$	No.	No.	$	$
	1952—concluded								
22	Cotton yarn and cloth	1,601	955	8,994,590	3,519	13,038	7,375	44,711,180	2,190
23	Sheet metal products	2,618	965	13,782,327	3,847	12,161	1,597	38,786,513	2,819
24	Castings, iron	1,639	589	8,963,232	4,023	13,411	298	42,179,009	3,077
25	Butter and cheese	3,524	1,674	11,912,465	2,292	14,319	918	36,913,923	2,423
26	Petroleum products	3,207	1,046	18,186,998	4,276	7,342	66	27,958,424	3,774
27	Sash, door and planing mills	3,177	616	10,615,311	2,799	15,529	203	33,371,596	2,121
28	Hardware, tools and cutlery	2,022	1,019	11,509,823	3,785	9,728	1,581	32,155,048	2,843
29	Synthetic textiles and silk	2,373	1,015	12,899,801	3,807	9,213	3,122	29,808,704	2,417
30	Footwear, leather	1,735	807	8,556,737	3,366	9,718	8,437	32,535,264	1,792
31	Bridge building and structural steel	1,926	410	10,246,240	4,386	8,453	35	27,172,640	3,201
32	Miscellaneous iron and steel products	1,574	408	8,569,018	4,323	8,679	403	26,580,943	2,927
33	Boxes and bags, paper	1,527	761	9,428,736	4,121	6,330	4,456	25,011,878	2,319
34	Radios and radio parts	2,733	1,034	13,610,875	3,613	4,261	3,728	20,373,654	2,550
35	Miscellaneous chemical products	2,454	961	12,085,270	3,539	6,499	1,483	21,609,471	2,707
36	Fruit and vegetable preparations	1,723	939	8,757,719	3,290	6,982	6,376	23,235,137	1,739
37	Brass and copper products	1,331	579	7,642,712	4,001	7,151	650	23,391,562	2,999
38	Breweries	1,282	374	8,100,019	4,891	6,420	87	22,043,533	3,388
39	Machinery, household, office and store	1,428	576	6,860,486	3,423	6,865	986	22,530,009	2,870
40	Boilers, tanks and platework	1,646	500	8,713,295	4,060	5,884	129	19,555,856	3,252
	Totals, Forty Leading Industries	**132,124**	**46,601**	**638,288,056**	**3,571**	**600,050**	**118,413**	**1,993,230,993**	**2,774**
	Grand Totals, All Industries, 1952	**188,235**	**74,792**	**923,905,251**	**3,513**	**810,060**	**215,295**	**2,713,714,909**	**2,647**

Average Earnings of Wage-Earners.—In comparing earnings by provinces or groups, consideration should be given to the type of industries in each case since the distribution of industries has a very definite regional significance. In some industries a labour force possessing deftness and speed or the ability to exercise muscular strength is necessary, in others the labour force must exercise craftsmanship or possess a high degree of technical knowledge. Workers in the latter industries naturally command relatively higher wages than those in industries where employees are routine workers.

The ranking of provinces and industries as regards annual earnings is, in many cases, different from that of weekly or hourly earnings since the factors of number of weeks worked per year and number of hours worked per week enter into the picture.

The figures for the years 1943 to 1945 given in Table **21** are based on an analysis of a pay-list covering one week in the month of highest employment. For this reason the figures do not refer to any particular month, since the month of highest employment might be May for one firm and October for another; they represent the summation of the different months of highest employment as reported by all the firms. For a particular industry, however, the month of highest employment is more significant because then it coincides for a great number of firms engaged in the same industry. The figures since 1946 are based on returns received from establishments employing 15 or more persons; figures for 1946 and 1947 refer to the last week in November, whereas those for later years refer to the last week in October.

21.—Average Annual, Weekly and Hourly Earnings of Male and Female Wage-Earners Employed in Manufacturing Industries, 1943-52

NOTE.—Butter and cheese factories and fish-curing and -packing plants are excluded in the years 1943 to 1945, and sawmills are also excluded in 1945. By including sawmills, weekly earnings in 1945 would have been about $34.35 for male wage-earners.

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
Male Wage-Earners—				
1943 [1]	1,726	33·80	67·1	50·4
1944 [1]	1,761	34·95	71·2	49·1
1945 [1]	1,739	35·04	73·6	47·6
1946 [2]	1,702	36·23	80·7	44·9
1947 [2]	1,909	41·35	92·1	44·9
1948 [3]	2,175	45·73	102·3	44·7
1949 [3]	2,291	47·33	106·6	44·4
1950 [3]	2,419	50·93	114·2	44·6
1951 [2]	2,693	56·46	131·3	43·0
1952 [3]	2,915	60·85	140·2	43·4
Female Wage-Earners—				
1943 [1]	987	19·33	43·1	44·8
1944 [1]	1,051	20·89	47·9	43·6
1945 [1]	984	19·84	46·5	42·7
1946 [2]	943	20·08	50·2	40·0
1947 [2]	1,067	23·11	58·2	39·7
1948 [3]	1,233	25·91	65·1	39·8
1949 [3]	1,315	27·18	68·3	39·8
1950 [3]	1,376	29·00	72·5	40·0
1951 [3]	1,492	31·27	82·5	37·9
1952 [3]	1,638	34·17	86·3	39·6
All Wage-Earners—				
1943 [1]	1,525	29·87	61·2	48·8
1944 [1]	1,564	31·05	65·4	47·5
1945 [1]	1,538	30·98	66·9	46·3
1946 [2]	1,516	32·38	74·1	43·7
1947 [2]	1,713	37,19	85·1	43·7
1948 [3]	1,960	41·25	94·6	43·6
1949 [3]	2,067	42·61	98·4	43·3
1950 [3]	2,183	45·94	105·6	43·5
1951 [3]	2,434	51·32	122·2	42·0
1952 [3]	2,647	55·17	129·5	42·6

[1] Based on one week in month of highest employment.

[2] Based on last week of November and on returns from establishments employing 15 persons or over.

[3] Based on last week in October and on returns from establishments employing 15 persons or over.

Average annual earnings as shown in Tables **22** and **23** are calculated on the basis of the total amount of wages paid during the year; weekly earnings are based on an analysis of the pay-list for the last week in October for establishments employing 15 or more persons.

22.—Average Annual, Weekly and Hourly Earnings of Wage-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952

Year, Province and Industrial Group	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
1951				
PROVINCE				
Newfoundland[1]	2,350	52·37	115·1	45·5
Prince Edward Island	1,312	34·10	74·3	45·9
Nova Scotia	2,024	44·77	103·4	43·3
New Brunswick	2,087	46·87	105·8	44·3
Quebec	2,216	47·26	109·9	43·0
Ontario	2,602	53·87	129·5	41·6
Manitoba	2,270	48·46	116·5	41·6
Saskatchewan	2,363	49·18	118·8	41·4
Alberta	2,323	50·39	122·0	41·3
British Columbia	2,723	58·65	150·0	39·1
Yukon and Northwest Territories	2,686	..	..	..
Canada, 1951	**2,434**	**51·32**	**122·2**	**42·0**
INDUSTRIAL GROUP				
Food and beverages	2,113	44·79	103·2	43·4
Tobacco and tobacco products	2,279	51·75	124·7	41·5
Rubber products	2,622	54·69	132·1	41·4
Leather products	1,684	33·61	89·4	37·6
Textile products (except clothing)	2,046	40·00	99·0	40·4
Clothing (textile and fur)	1,691	33·21	90·5	36·7
Wood products	2,136	48·18	112·3	42·9
Paper products	3,130	63·98	137·6	46·5
Printing, publishing and allied trades	2,575	54·24	135·6	40·0
Iron and steel products	2,833	58·86	138·5	42·5
Transportation equipment	2,867	58·18	138·2	42·1
Non-ferrous metal products	2,866	57·56	137·7	41·8
Electrical apparatus and supplies	2,673	56·03	135·0	41·5
Non-metallic mineral products	2,616	54·77	121·7	45·0
Products of petroleum and coal	3,172	67·15	162·2	41·4
Chemicals and allied products	2,612	52·78	123·6	42·7
Miscellaneous industries	2,063	41·63	99·6	41·8
1952				
PROVINCE				
Newfoundland	2,479	54·42	123·4	44·1
Prince Edward Island	1,455	43·53	96·3	45.2
Nova Scotia	2,187	46·89	110·6	42·4
New Brunswick	2,201	48·33	109·6	44·1
Quebec	2,413	50·64	115·1	44·0
Ontario	2,840	58·27	138·4	42·1
Manitoba	2,443	51·17	123·0	41·6
Saskatchewan	2,609	52·87	127·7	41·4
Alberta	2,518	55·10	133·1	41·4
British Columbia	2,975	62·21	158·3	39·3
Yukon and Northwest Territories	3,366	..	..	..
Canada, 1952	**2,647**	**55·17**	**129·5**	**42·6**

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[1] *See* footnote, end of table.

22.—Average Annual, Weekly and Hourly Earnings of Wage-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952—concluded

Industrial Group	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
1952—concluded				
INDUSTRIAL GROUP				
Food and beverages	2,285	47·75	110·8	43·1
Tobacco and tobacco products	2,526	50·96	124·9	40·8
Rubber products	2,858	58·04	137·2	42·3
Leather products	1,854	38·38	93·6	41·0
Textile products (except clothing)	2,223	45·68	105·0	43·5
Clothing (textile and fur)	1,812	37·39	93·7	39·9
Wood products	2,279	51·86	118·4	43·8
Paper products	3,294	64·27	142·5	45·1
Printing, publishing and allied trades	2,818	59·64	149·1	40·0
Iron and steel products	3,109	63·09	147·4	42·8
Transportation equipment	3,095	64·13	151·6	42·3
Non-ferrous metal products	3,131	62·35	148·1	42·1
Electrical apparatus and supplies	2,929	59·28	140·8	42·1
Non-metallic mineral products	2,842	58·27	129·2	45·1
Products of petroleum and coal	3,595	72·33	174·3	41·5
Chemicals and allied products	2,827	56·56	133·7	42·3
Miscellaneous industries	2,186	44·05	103·9	42·4

[1] Includes fish processing for the first time and since this is a seasonal industry, annual earnings are lower than weekly or hourly earnings would indicate; average annual earnings for this industry were $1,151 as compared with $2,806 for other industries of the Province.

23.—Average Annual, Weekly and Hourly Earnings of Male and Female Wage-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952.

Year and Province	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	$	$	cents	No.	$	$	cents	No.
1951								
PROVINCE								
Newfoundland[1]	2,613	56·80	123·2	46·1	852	18·51	45·7	40·5
Prince Edward Island	1,521	38·33	82·6	46·4	808	20·34	45·8	44·4
Nova Scotia	2,179	48·30	111·3	43·4	998	22·14	51·6	42·9
New Brunswick	2,275	51·42	113·0	45·5	1,188	26·86	68·7	39·1
Quebec	2,528	53·58	119·6	44·8	1,385	29·37	77·7	37·8
Ontario	2,848	58·60	138·2	42·4	1,635	33·66	88·8	37·9
Manitoba	2,532	53·21	125·5	42·4	1,382	29·07	75·7	38·4
Saskatchewan	2,473	51·58	123·4	41·8	1,568	32·69	84·7	38·6
Alberta	2,449	52·83	127·0	41·6	1,531	33·04	85·6	38·6
British Columbia	2,871	61·70	156·2	39·5	1,599	34·36	95·7	35·9
Yukon and Northwest Territories	..	..	..	..	..	..	..	..
Canada, 1951	**2,693**	**56·46**	**131·3**	**43·0**	**1,492**	**31·27**	**82·5**	**37·9**

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[1] *See* footnote to Table 22.

23.—Average Annual, Weekly and Hourly Earnings of Male and Female Wage-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952—concluded.

Year, Province and Industrial Group	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	$	$	cents	No.	$	$	cents	No.
1951—concluded								
INDUSTRIAL GROUP								
Food and beverages	2,371	50·67	112·6	45·0	1,370	29·29	75·1	39·0
Tobacco and tobacco products	2,657	60·49	138·1	43·8	2,030	46·24	115·6	40·0
Rubber products	2,861	59·77	142·3	42·0	1,848	38·59	97·7	39·5
Leather products	1,992	39·71	102·6	38·7	1,251	24·95	69·3	36·0
Textile products (except clothing)	2,292	44·81	106·7	42·0	1,627	31·82	84·4	37·7
Clothing (textile and fur)	2,383	47·14	121·5	38·8	1,380	27·28	76·2	35·8
Wood products	2,166	48·98	113·9	43·0	1,525	34·47	84·9	40·6
Paper products	3·347	67·87	143·8	47·2	1,630	33·05	80·8	40·9
Printing, publishing and allied trades	2,917	61·87	152·4	40·6	1,374	29·11	76·6	38·0
Iron and steel products	2,886	59·95	140·4	42·7	1,885	39·16	98·4	39·8
Transportation equipment	2,895	58·66	139·0	42·2	2,096	42·45	109·7	38·7
Non-ferrous metal products	2,979	59·68	142·1	42·0	1,618	32·40	81·0	40·0
Electrical apparatus and supplies	2,932	61·24	144·1	42·5	1,982	41·41	107·0	38·7
Non-metallic mineral products	2,699	56·31	124·3	45·3	1,646	34·33	85·4	40·2
Products of petroleum and coal	3,181	67·32	162·6	41·4	1,750	..	..	..
Chemical and allied products	2,845	57·03	131·7	43·3	1,579	31·64	79·9	39·6
Miscellaneous industries	2,411	48·93	113·0	43·3	1,529	31·01	78·5	39·5
1952								
PROVINCE								
Newfoundland	2,705	58·78	131·8	44·6	903	19·62	48·8	40·2
Prince Edward Island	1,719	48·13	104·4	46·1	801	22·41	54·8	40·9
Nova Scotia	2,349	50·41	118·9	42·4	1,113	23·89	56·2	42·5
New Brunswick	2,376	52·19	116·5	44·8	1,340	29·42	72·1	40·8
Quebec	2,741	57·74	126·9	45·5	1,519	32·00	79·8	40·1
Ontario	3,094	63·60	148·6	42·8	1,788	36·78	93·6	39·3
Manitoba	2,698	56·34	133·5	42·2	1,562	32·63	82·2	39·7
Saskatchewan	2,730	55·30	132·3	41·8	1,753	35·52	91·3	38·9
Alberta	2,653	58·30	138·8	42·0	1,661	36·48	95·5	38·2
British Columbia	3,127	65·35	164·6	39·7	1,776	37·11	102·5	36·2
Yukon and Northwest Territories	..	..	..	..	..	..	..	..
Canada, 1952	**2,915**	**60·85**	**140·2**	**43·4**	**1,638**	**34·17**	**86·3**	**39·6**
INDUSTRIAL GROUP								
Food and beverages	2,564	54·36	121·6	44·7	1,467	31·12	79·6	39·1
Tobacco and tobacco products	2,975	60·24	141·4	42·6	2,231	45·18	113·8	39·7
Rubber products	3,117	63·60	148·6	42·8	2,039	41·62	102·5	40·6
Leather products	2,218	46·04	109·1	42·2	1,371	28·45	72·2	39·4
Textile products (except clothing)	2,477	50·73	113·5	44·7	1,788	36·63	88·9	41·2
Clothing (textile and fur)	2,579	54·06	127·2	42·5	1.473	30·85	79·5	38·8
Wood products	2,312	52·80	120·0	44·0	1,637	37·36	90·9	41·1
Paper products	3,499	67·89	149·2	45·5	1,774	34·40	82·7	41·6
Printing, publishing and allied trades	3,179	67·84	167·1	40·6	1,500	32·00	84·2	38·0
Iron and steel products	3,159	64·05	149·3	42·9	2,088	42·35	105·6	40·1
Transportation equipment	3,127	64·66	152·5	42·4	2,201	45·51	118·2	38·5
Non-ferrous metal products	3,250	64·52	152·9	42·2	1,771	35·18	85·8	41·0
Electrical apparatus and supplies	3,181	64·59	150·9	42·8	2,201	44·67	111·4	40·1
Non-metallic mineral products	2,931	60·20	132·3	45·5	1,750	35·94	89·4	40·2
Products of petroleum and coal	3,607	72·50	174·7	41·5	1,984	..	..	..
Chemical and allied products	3.073	61·20	143·0	42·8	1,718	34·21	86·4	39·6
Miscellaneous industries	2,574	52·98	119·6	44·3	1,555	32·00	80·4	39·8

Average Earnings of Salaried Employees.—Beginning with 1946, the survey of weekly earnings and hours worked by wage-earners was expanded to include salaried employees. The survey covers establishments employing 15 persons or over and refers to the last week in November for 1946 and 1947 and to the last week in October for 1948-52. Earnings and hours worked are reported for male and female wage and salary earners in 13 groups of hours, ranging from 30 or less to 65 or more. The earnings reported for the week constitute the gross amount paid before deductions for income tax, unemployment insurance, etc. Weekly and hourly earnings as well as hours worked are thus obtained directly from the tabulated results of the reports. Annual earnings are calculated on the basis of weekly earnings correlated with the results of the annual Census of Industry.

24.—Average Annual, Weekly and Hourly Earnings of Male and Female Salary-Earners Employed in Manufacturing Industries, 1946-52

Year	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
Male Salary-Earners—				
1946 [1]	..	53·21	126·7	42·6
1947 [1]	..	60·21	146·1	41·2
1948 [2]	3,147	63·47	154·4	41·1
1949 [2]	3,317	65·37	160·2	40·8
1950 [2]	3,507	69·35	172·5	40·2
1951 [2]	3,852	77·55	193·9	40·0
1952 [2]	3,985	82·60	207·0	39·9
Female Salary-Earners—				
1946 [1]	..	25·91	65·6	39·5
1947 [1]	..	28·68	73·7	38·9
1948 [2]	1,551	31·26	80·5	38·8
1949 [2]	1,655	32·62	84·5	38·6
1950 [2]	1,739	34·38	89·5	38·4
1951 [2]	1,907	38·42	100·6	38·2
1952 [2]	2,323	41·26	108·6	38·0
All Salary-Earners—				
1946 [1]	..	43·85	106·7	41·1
1947 [1]	..	49·78	123·2	40·4
1948 [2]	2,687	52·91	131·3	40·3
1949 [2]	2,836	54·85	136·8	40·1
1950 [2]	2,998	58·74	148·0	39·7
1951 [2]	3,296	65·98	167·0	39·5
1952 [2]	3,513	70·75	179·6	39·4

[1] Based on the last week in November.

[2] Based on the last week in October.

25.—Average Annual, Weekly and Hourly Earnings of Salary-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952

Year, Province and Industrial Group	Average Earnings			Average Hours Worked per Week
	Annual	Weekly	Hourly	
	$	$	cents	No.
1951				
Province				
Newfoundland	2,383	62·04	144·3	43·0
Prince Edward Island	1,715	46·90	108·1	43·4
Nova Scotia	2,500	58·43	140·1	41·7
New Brunswick	2,757	57·65	137·9	41·8
Quebec	3,241	64·67	162·9	39·7
Ontario	3,489	67·29	172·5	39·0
Manitoba	3,050	60·57	150·3	40·3
Saskatchewan	2,444	56·35	136·4	41·3
Alberta	2,558	62·06	150·3	41·3
British Columbia	3,174	71·10	177·8	40·0
Yukon and Northwest Territories	..	..	..	..
Canada, 1951	**3,296**	**65·98**	**167·0**	**39·5**
Industrial Group				
Food and beverages	2,941	61·78	152·5	40·5
Tobacco and tobacco products	3,665	66·73	178·9	37·3
Rubber products	3,361	63·90	166·8	38·3
Leather products	3,264	56·30	140·0	40·2
Textile products (except clothing)	3,655	65·41	164·3	39·8
Clothing (textile and fur)	3,375	57·54	145·7	39·5
Wood products	2,250	64·48	155·4	41·5
Paper products	4,338	79·57	204·6	38·9
Printing, publishing and allied trades	2,749	57·20	149·7	38·2
Iron and steel products	3,635	67·65	173·0	39·1
Transportation equipment	3,733	71·39	174·1	41·0
Non-ferrous metal products	3,585	73·63	185·9	39·6
Electrical apparatus and supplies	3,468	64·82	167·1	38·8
Non-metallic mineral products	3,297	66·34	168·8	39·3
Products of petroleum and coal	3,662	74·52	194·1	38·4
Chemicals and allied products	3,379	66·37	171·9	38·6
Miscellaneous industries	3,246	60·89	156·5	38·9
1952				
Province				
Newfoundland	2,345	62·62	146·7	42·7
Prince Edward Island	1,909	49·63	120·2	41·3
Nova Scotia	2,653	60·30	142·6	42·3
New Brunswick	2,910	61·83	149·0	41·5
Quebec	3,482	68·88	174·4	39·5
Ontario	3,691	72·73	186·5	39·0
Manitoba	3,219	64·14	160·8	39·9
Saskatchewan	2,605	58·08	140·0	41·5
Alberta	2,888	67·20	165·9	40·5
British Columbia	3,414	74·54	188·2	39·6
Yukon and Northwest Territories	2,831	..	..	..
Canada, 1952	**3,513**	**70·75**	**179·6**	**39·4**
Industrial Group				
Food and beverages	3,103	64·68	159·7	40·5
Tobacco and tobacco products	3,922	68·33	182·2	37·5
Rubber products	3,572	67·63	174·8	38·7
Leather products	3,396	58·74	145·4	40·4
Textile products (except clothing)	3,700	68·65	174·2	39·4
Clothing (textile and fur)	3,561	60·73	153·7	39·5
Wood products	2,366	67·77	163·3	41·5
Paper products	4,618	83·19	216·6	38·4
Printing, publishing and allied trades	3,003	61·13	161·3	37·9
Iron and steel products	3,879	71·71	183·4	39·1
Transportation equipment	3,909	77·61	186·1	41·7
Non-ferrous metal products	3,870	78·70	201·8	39·0
Electrical apparatus and supplies	3,691	70·83	184·0	38·5
Non-metallic mineral products	3,511	71·45	186·1	38·4
Products of petroleum and coal	4,092	95·23	259·5	36·7
Chemicals and allied products	3,626	71·48	186·1	38·4
Miscellaneous industries	3,436	66·57	173·8	38·3

26.—Average Annual, Weekly and Hourly Earnings of Male and Female Salary-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952.

Year, Province and Industrial Group	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
	$	$	cents	No.	$	$	cents	No.
1951								
Province								
Newfoundland	2,604	70·71	163·3	43·3	1,135	30·80	73·3	42·0
Prince Edward Island	1,918	55·98	126·4	44·3	917	26·75	64·8	41·3
Nova Scotia	2,821	67·83	160·4	42·3	1,329	31·95	79·5	40·2
New Brunswick	3,175	68·64	161·1	42·6	1,467	31·72	79·1	40·1
Quebec	3,769	75·77	188·0	40·3	1,858	37·32	98·0	38·1
Ontario	4,135	79·67	201·7	39·5	2,051	39·49	104·2	37·9
Manitoba	3,519	70·20	173·3	40·5	1,756	35·06	88·5	39·6
Saskatchewan	2,764	64·97	156·2	41·6	1,584	37·25	91·1	40·9
Alberta	2,870	71·12	171·0	41·6	1,487	36·86	91·5	40·3
British Columbia	3,606	81·66	203·1	40·2	1,767	40·03	102·4	39·1
Yukon and Northwest Territories	..	..	..	..	..	..	..	..
Canada, 1951	**3,852**	**77·55**	**193·9**	**40·0**	**1,907**	38·42	**100·6**	38·2
Industrial Group								
Food and beverages	3,406	71·15	173·1	41·1	1,785	37·29	95·4	39·1
Tobacco and tobacco products	4,390	78·21	208·6	37·5	2,379	42·41	115·2	36·8
Rubber products	3,926	74·59	194·2	38·4	1,967	37·40	98·4	38·0
Leather products	3,795	66·47	161·3	41·2	1,958	34·33	90·1	38·1
Textile products (except clothing)	4,465	79·67	196·7	40·5	2,063	36·78	95·8	38·4
Clothing (textile and fur)	4,157	72·45	179·3	40·4	2,116	36·85	96·2	38·3
Wood products	2,407	74·34	174·9	42·5	1,204	37·16	96·0	38·7
Paper products	5,147	93·92	239·0	39·3	2,224	40·60	106·8	38·0
Printing, publishing and allied trades	3,352	69·61	180·8	38·5	1,773	36·83	97·4	37·8
Iron and steel products	4,195	78·15	197·3	39·6	2,056	38·30	101·0	37·9
Transportation equipment	4,214	80·85	195·8	41·3	2,162	41·51	104·0	39·9
Non-ferrous metal products	4,188	85·63	213·0	40·2	1,968	40·21	105·5	38·1
Electrical apparatus and supplies	4,055	75·51	192·1	39·3	2,060	38·37	102·0	37·6
Non-metallic mineral products	3,793	76·94	192·8	39·9	1,904	38·61	102·7	37·6
Products of petroleum and coal	4,147	81·92	211·7	38·7	2,161	42·72	115·1	37·1
Chemicals and allied products	4,061	78·79	202·5	38·9	2,079	40·31	106·1	38·0
Miscellaneous industries	3,960	75·50	188·3	40·1	1,925	36·73	99·3	37·0
1952								
Province								
Newfoundland	2,529	71·47	166·2	43·0	1,275	31·55	76·4	41·3
Prince Edward Island	2,117	59·33	142·3	41·7	1,050	29·40	72·4	40·6
Nova Scotia	2,936	68·54	158·7	43·2	1,691	34·74	87·3	39·8
New Brunswick	3,258	71·50	169·4	42·2	1,867	35·44	89·7	39·5
Quebec	3,929	79·92	199·8	40·0	2,310	40·52	106·1	38·2
Ontario	4,236	85·77	216·6	39·6	2,461	42·24	112·0	37·7
Manitoba	3,638	73·66	182·3	40·4	2,114	37·27	96·8	38·5
Saskatchewan	2,871	67·22	160·0	42·0	1,883	38·11	94·6	40·3
Alberta	3,183	76·73	187·6	40·9	1,919	40·55	102·9	39·4
British Columbia	3,785	84·76	211·9	40·0	2,131	42·00	109·7	38·3
Yukon and Northwest Territories	..	..	..	..	..	..	..	..
Canada, 1952	**3,985**	82·60	**207·0**	**39·9**	**2,323**	**41·26**	**108·6**	**38·0**

26.—Average Annual, Weekly and Hourly Earnings of Male and Female Salary-Earners in the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952—concluded.

Year and Industrial Group	Male				Female			
	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week	Average Annual Earnings	Average Weekly Earnings	Average Hourly Earnings	Average Hours Worked per Week
1952—concluded	$	$	cents	No.	$	$	cents	No.
INDUSTRIAL GROUP								
Food and beverages	3,500	73·74	179·4	41·1	2,145	39·65	102·5	38·7
Tobacco and tobacco products	4,408	78·96	209·4	37·7	3,055	47·34	127·3	37·2
Rubber products	3,999	78·53	200·8	39·1	2,415	40·87	107·8	37·9
Leather products	3,864	69·22	168·0	41·2	2,326	35·35	92·1	38·4
Textile products (except clothing)	4,313	82·79	207·0	40·0	2,480	39·50	103·1	38·3
Clothing (textile and fur)	4,136	76·11	188·9	40·3	2,639	38·74	100·9	38·4
Wood products	2,505	77·06	180·9	42·6	1,435	38·83	101·1	38·4
Paper products	5,318	97·11	250·9	38·7	2,803	43·80	117·1	37·4
Printing, publishing and allied trades	3,498	74·67	196·5	38·0	2,200	38·48	102·3	37·6
Iron and steel products	4,369	82·53	208·9	39·5	2,473	40·62	106·9	38·0
Transportation equipment	4,346	87·79	206·6	42·5	2,516	44·92	114·6	39·2
Non-ferrous metal products	4,402	90·39	229·4	39·4	2,373	42·39	112·1	37·8
Electrical apparatus and supplies	4,170	81·92	211·1	38·8	2,527	42·95	114·2	37·6
Non-metallic mineral products	3,951	82·48	211·5	39·0	2,276	41·15	111·8	36·8
Products of petroleum and coal	4,620	108·63	293·6	37·0	2,504	51·57	143·6	35·9
Chemicals and allied products	4,205	84·46	218·2	38·7	2,527	42·95	113·3	37·9
Miscellaneous industries	3,962	80·66	204·2	39·5	2,413	40·57	113·0	35·9

A survey of weekly earnings of salaried employees, classified by (1) managerial and professional employees and (2) office workers, was made for the first time in 1951; it will be repeated every third year. Results of the 1951 survey show that weekly earnings for both sexes in 1951 averaged $98.38 for managerial and professional employees and $51.14 for office workers. Newfoundland with $116.20 for both sexes was the highest paying province as regards managerial and professional employees, while British Columbia with $55.75 was the highest paying province for office workers.

In the managerial classification, male employees in the paper products group were the highest paid, followed by textile products (except clothing), transportation equipment and iron and steel products. Managerial employees in the tobacco products group were the lowest paid. In the same category, female employees in the transportation equipment group were the highest paid and those in the miscellaneous group were the lowest paid.

As for office workers, the tobacco products group paid the highest salaries to both men and women and printing, publishing and allied industries paid the lowest salaries to men and leather products industries the lowest to women.

27.—Average Weekly Earnings of Salaried Employees in the Manufacturing Industries, classified by Managerial and Professional Employees and Office Workers, by Province and Industrial Group, 1951.

Province and Industrial Group	Managerial and Professional Employees			Office Workers			All Salaried Employees		
	Male	Female	Both Sexes	Male	Female	Both Sexes	Male	Female	Both Sexes
	$	$	$	$	$	$	$	$	$
PROVINCE									
Newfoundland	121·37	—	116·20	52·93	30·19	47·02	70·71	30·80	62·04
Prince Edward Island	—	—	—	—	—	—	55·98	26·75	46·90
Nova Scotia	89·34	—	88·62	57·87	31·66	49·00	67·83	31·95	58·43
New Brunswick	93·54	—	93·40	53·97	31·51	44·96	68·64	31·72	57·65
Quebec	101·30	56·35	99·57	58·82	36·54	50·04	75·77	37·32	64·67
Ontario	100·13	57·80	98·81	62·44	38·86	52·02	79·67	39·49	67·29
Manitoba	88·56	—	87·91	55·69	34·53	47·28	70·20	35·06	60·57
Saskatchewan	79·98	—	79·53	51·31	36·97	44·73	64·97	37·25	56·35
Alberta	89·66	—	89·23	57·25	36·48	49·32	71·12	36·86	62·06
British Columbia	101·78	59·14	100·95	65·46	39·52	55·75	81·66	40·03	71·10
Totals	**99·73**	**57·04**	**98·38**	**60·68**	**37·77**	**51·14**	**77·55**	**38·42**	**65·98**
INDUSTRIAL GROUP									
Food and beverages	87·54	57·65	86·89	56·49	36·72	48·31	71·15	37·29	61·78
Tobacco and tobacco products	86·56	—	87·06	70·18	41·53	56·47	78·21	42·41	66·73
Rubber products	98·26	—	97·48	56·32	37·09	48·40	74·59	37·40	63·90
Leather products	91·58	—	90·22	53·97	33·56	45·78	66·47	34·33	56·30
Textile products (except clothing)	105·45	54·65	103·41	58·75	36·08	48·21	79·67	36·78	65·41
Clothing (textile and fur)	99·62	58·38	95·67	55·32	35·55	44·92	72·45	36·85	57·54
Wood products	97·48	59·47	96·70	61·33	36·69	52·56	74·34	37·16	64·48
Paper products	126·91	58·22	125·26	67·67	40·06	56·87	93·92	40·60	79·57
Printing, publishing and allied industries	93·55	54·20	90·05	53·89	35·65	45·02	69·61	36·83	57·20
Iron and steel products	102·32	58·37	101·60	63·14	37·94	53·99	78·15	38·30	67·65
Transportation equipment	104·51	60·71	104·15	66·15	41·32	57·79	80·85	41·51	71·39
Non-ferrous metal products	101·79	57·75	100·99	63·70	39·67	52·87	85·63	40·21	73·63
Electrical apparatus and supplies	97·51	57·99	96·41	62·06	37·83	52·67	75·51	38·37	64·82
Non-metallic mineral products	98·31	—	97·87	59·17	38·24	50·64	76·94	38·61	66·34
Products of petroleum and coal	101·13	—	99·87	63·15	40·72	56·48	81·92	42·72	74·52
Chemical and allied products	95·77	55·44	93·97	56·55	39·41	47·81	78·79	40·31	66·37
Miscellaneous industries	97·11	52·44	95·30	56·66	36·20	45·96	75·50	36·73	60·89

'Real' Earnings of Employees.—When the index number representing the average yearly earnings is divided by the Consumer Price Index, on the same base, a measure of 'real' wages is obtained. Index numbers for 1943-52 are given in Table 28.

28.—Average Yearly Earnings, and Index Numbers of Earnings, Consumer Price Index and Real Wages of Wage-Earners in Manufacturing Industries, 1943-52

NOTE.—Figures for 1931-42 are given in the 1947 Year Book, p. 560.

Year	Wages Paid	Average Wage-Earners	Average Yearly Earnings	Index Numbers (1949=100)		
				Average Yearly Earnings	Consumer Price Index	Real Value of Average Yearly Earnings
	$	No.	$			
1943	1,598,434,879	1,047,873	1,525	73·8	74·2	99·5
1944	1,611,555,776	1,030,324	1,564	75·7	74·6	101·5
1945	1,427,915,830	928,665	1,538	74·4	75·0	99·2
1946	1,329,811,478	877,150	1,516	73·3	77·5	94·6
1947	1,611,232,166	940,650	1,713	82·9	84·8	97·8
1948	1,876,773,231	957,491	1,960	94·8	97·0	97·7
1949	1,963,462,720	949,656	2,067	100·0	100·0	100·0
1950	2,078,634,086	952,244	2,183	105·6	102·9	102·6
1951	2,459,566,313	1,010,588	2,434	117·8	113·7	103·6
1952	2,713,714,909	1,025,355	2,647	128·1	116·5	110·0

Percentages of Salaries and Wages to Net Value of Products.—Table **29** shows the relation between salaries and wages paid by manufacturers and the total net value of production. Figures of gross production are often used in such calculations, but the values out of which the wages of employees must come in the long run are the values added to the raw materials while they are in the factory. Such added values constitute the real production of the manufacturing plant and are alone available for payment of salaries and wages, interest, rent, taxes, repairs and all other overhead charges that ordinarily must be met. The percentage of salaries declined steadily with the increasing manufacturing production from 1924 to 1929, while from 1931 to 1935 and again in 1938 and 1939, the percentage of salaries to value added was above normal owing to decreased industrial activity. It should be borne in mind, however, that salaried employees increased 276 p.c. during the period 1924-52 while wage-earners increased 146 p.c. The percentage of wages has fluctuated much less than that of salaries. The number of wage-earning employees may be adjusted more rapidly to the activity of the industry and wage levels likewise may be adjusted more readily to the price levels of the products. Of the increase in the net value of production since 1939, 49 p.c. was passed along in increased salaries and wages.

29.—Percentage of Salaries and Wages Paid to the Total Net Value of Manufacturing Production, 1943-52

Year	Value Added by Processes of Manufacture[1]	Salaries Paid	Wages Paid	Percentages—		
				of Salaries to Value Added	of Wages to Value Added	of Total Salaries and Wages to Value Added
	$	$	$	p.c.	p.c.	p.c.
1943	3,816,413,541	388,857,505	1,598,434,879	10·2	42·0	52·2
1944	4,015,776,010	418,065,594	1,611,555,776	10·4	40·2	50·6
1945	3,564,315,899	417,857,619	1,427,915,830	11·7	40·1	51·8
1946	3,467,004,980	410,875,776	1,329,811,478	11·8	38·4	50·2
1947	4,292,055,802	474,693,800	1,611,232,166	11·0	37·6	48·6
1948	4,938,786,981	532,594,959	1,876,773,231	10·8	38·0	48·8
1949	5,330,566,434	628,427,937	1,963,462,720	11·8	36·8	48·6
1950	5,942,058,229	692,633,349	2,078,634,086	11·6	35·0	46·6
1951	6,940,946,783	816,714,604	2,459,566,313	11·8	35·4	47·2
1952	7,443,533,199	923,905,251	2,713,714,909	12·4	36·5	48·9

[1] Equivalent to "net value of products"; *see* footnote 1, Table **1**, p. 634.

Subsection 2.—Capital, Repair and Maintenance Expenditures

Prior to 1944 the following information on capital investment was collected: (1) fixed capital—land, buildings, fixtures, machinery, tools and other equipment; and (2) working capital—inventory value of raw materials, stocks in process, fuel and miscellaneous supplies on hand; inventory value of finished products; cash, bills and accounts receivable, prepaid expenses, etc. This information was replaced in 1944 by the collection of expenditure statistics on fixed capital, repairs and maintenance. Although it is now impossible to calculate the total investment in the fixed and current assets in manufacturing, it is still possible to calculate the investment in fixed assets. Total investment in fixed assets can be obtained with an approximate degree of accuracy by starting with the total investment in 1943, which amounted to $3,002,900,000, and adding the expenditures to date and then deducting on a straight-line basis the normal rates of depreciation allowed by the Income Tax Department. Comparative figures of the investment in fixed assets since 1939 are as follows:—

Year	*Amount*	*Average per Employee*
	$	$
1939	2,168,900,000	3,296
1943	3,002,900,000	2,420
1948	4,055,500,000	3,509
1949	4,262,800,000	3,640
1950	4,394,700,000	3,714
1951	4,760,800,000	3,783
1952	5,253,400,000	4,078

Between 1939 and 1943 there was a decrease of $876 in the value of fixed assets per employee, owing to a decline in the replacement of and additions to buildings and equipment during the war years and also to an increase in the number of shifts worked and a resulting increase in number of employees. After the War, investment in fixed assets increased rapidly. Old plants were modernized and new plants were built to take care of expanded home markets resulting from higher purchasing power and increased population. The net result in this development was an increase of $782 in the value of buildings and equipment per employee between 1939 and 1952.

30.—Capital, Repair and Maintenance Expenditure by the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952, with Totals for 1944-52.

Year and Province	Capital Expenditure			Repair and Maintenance Expenditure		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
1944	61·3	150·1	211·4	60·7	173·5	234·2
1945	75·9	204·2	280·1	63·1	170·6	233·7
1946	132·2	205·0	337·2	56·8	164·3	221·1
1947	184·7	343·2	527·9	62·4	210·7	273·1
1948	184·8	394·2	579·0	78·9	253·9	332·8
1949	156·6	379·2	535·8	66·7	267·2	333·9
1950	135·4	367·1	502·5	67·6	279·0	346·6
1951						
PROVINCE						
Newfoundland	3·4	6·4	9·8	1·2	4·2	5·4
Prince Edward Island	0·2	0·2	0·4	0·1	0·2	0·3
Nova Scotia	1·8	10·6	12·4	5·0	6·4	11·4
New Brunswick	4·2	13·3	17·5	1·7	7·8	9·5
Quebec	54·7	143·8	198·5	21·3	96·6	117·9
Ontario	137·8	257·4	395·2	39·4	170·4	209·8
Manitoba	7·9	9·7	17·6	2·5	7·5	10·0
Saskatchewan	3·7	9·5	13·2	1·2	2·4	3·6
Alberta	12·7	23·9	36·6	2·7	5·8	8·5
British Columbia	41·2	50·2	91·4	9·9	35·7	45·6
Totals, 1951	**267·6**	**525·0**	**792·6**	**85·0**	**337·0**	**422·0**

30.—Capital, Repair and Maintenance Expenditure by the Manufacturing Industries, by Province and Industrial Group, 1951 and 1952, with Totals for 1944-52—concluded.

Year, Province and Industrial Group	Capital Expenditure			Repair and Maintenance Expenditure		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
1951—concluded INDUSTRIAL GROUP	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
Food and beverages	28·0	51·1	79·1	11·8	34·3	46·1
Tobacco and tobacco products	0·5	1·7	2·2	0·4	1·3	1·7
Rubber products	2·0	5·9	7·9	0·9	5·5	6·4
Leather products	0·9	1·9	2·8	0·6	2·1	2·7
Textile products (except clothing)	9·9	29·2	39·1	4·0	16·7	20·7
Clothing (textile and fur)	4·1	9·1	13·2	1·4	4·7	6·1
Wood products	11·2	27·4	38·6	7·7	24·5	32·2
Paper products	41·7	83·2	124·9	9·7	69·0	78·7
Printing, publishing and allied trades	6·3	18·0	24·3	1·7	4·6	6·3
Iron and steel products	47·1	50·1	97·2	13·0	58·9	71·9
Transportation equipment	21·8	27·1	48·9	6·9	21·5	28·4
Non-ferrous metal products	22·4	26·0	48·4	6·9	30·3	37·2
Electrical apparatus and supplies	16·3	15·6	31·9	2·2	11·4	13·6
Non-metallic mineral products	11·5	18·9	30·4	4·7	15·6	20·3
Products of petroleum and coal	21·7	37·3	59·0	8·3	8·8	17·1
Chemicals and allied products	19·2	38·5	57·7	4·0	24·8	28·8
Miscellaneous	3·0	4·4	7·4	0·8	3·0	3·8
Capital items charged to operating expense	—	79·6	79·6	—	—	—
1952 PROVINCE						
Newfoundland	5·4	9·7	15·1	0·9	8·5	9·4
Prince Edward Island	0·4	0·6	1·0	0·2	0·2	0·4
Nova Scotia	6·7	10·2	16·9	7·0	8·1	15·1
New Brunswick	3·1	10·6	13·7	1·1	8·5	9·6
Quebec	66·0	164·9	230·9	25·5	103·9	129·4
Ontario	158·3	318·9	477·2	43·6	179·5	223·1
Manitoba	3·1	8·7	11·8	3·4	9·4	12·8
Saskatchewan	3·5	6·2	9·7	1·4	2·8	4·2
Alberta	43·4	31·8	75·2	4·1	7·1	11·2
British Columbia	53·7	67·4	121·1	8·0	35·5	43·5
Totals, 1952	**343·6**	**629·0**	**972·6**	**95·2**	**363·5**	**458·7**
INDUSTRIAL GROUP						
Food and beverages	26·6	50·7	77·3	12·5	36·0	48·5
Tobacco and tobacco products	0·5	1·8	2·3	0·5	1·3	1·8
Rubber products	2·7	7·3	10·0	0·9	6·0	6·9
Leather products	0·6	1·7	2·3	0·6	2·0	2·6
Textile products (except clothing)	7·0	24·5	31·5	3·8	15·6	19·4
Clothing (textile and fur)	1·6	11·1	12·7	1·3	4·4	5·7
Wood products	9·3	22·5	31·8	6·1	23·5	29·6
Paper products	33·6	95·9	129·5	8·3	72·9	81·2
Printing, publishing and allied trades	3·3	11·0	14·3	1·5	4·1	5·6
Iron and steel products	46·2	89·7	135·9	16·1	64·8	80·9
Transportation equipment	37·1	25·0	62·1	11·6	31·1	42·7
Non-ferrous metal products	35·1	35·6	70·7	8·5	34·2	42·7
Electrical apparatus and supplies	21·8	18·6	40·4	2·8	11·7	14·5
Non-metallic mineral products	11·2	23·1	34·3	3·9	16·6	20·5
Products of petroleum and coal	41·1	36·4	77·5	11·2	9·5	20·7
Chemicals and allied products	61·2	79·8	141·0	4·5	26·6	31·1
Miscellaneous industries	4·7	4·1	8·8	1·1	3·2	4·3
Capital items charged to operating expense	—	90·2	90·2	—	—	—

Subsection 3.—Size of Manufacturing Establishments

The size of a manufacturing establishment is generally measured either by the value of product or by the number of employees but each of these methods has its limitations. The former measure has to be adjusted for changes in the price level and, as between industries, it makes those in which the cost of raw materials is relatively high appear to operate on a larger scale. The latter takes no account of the differences in capital equipment at different times or in various industries and, obviously, the increased use of machinery may lead to an increase in production concurrently with a decrease in number of employees.

Size as Measured by Gross Value of Products.—In 1929, the 719 establishments producing over $1,000,000 each had an aggregate value of products of $2,516,064,954, or 62 p.c. of the total for all manufacturing establishments. In 1931 the number of plants in that category was 482, their output being valued at $1,451,658,954, or 53 p.c. of the total. However, by 1944, war demands resulted in manufacturing establishments with a production of $1,000,000 increasing in number to 1,376 with an output of about 75 p.c. of the total value of manufactures. In 1946, with the decline in production of the large war plants, the manufactures of establishments with an output of $1,000,000 or over declined to 67 p.c. of the total manufactures although the number of plants increased to 1,442. In 1947, the number of plants increased to 1,716 and the proportion of their production to the total for all plants was 72 p.c. As a result of increased prices and expansion in the physical volume of production in the years 1947-52, establishments with a production of $1,000,000 or over increased to 2,397 in 1952 and their contribution to the total output rose to 78 p.c.

31.—Manufacturing Establishments and Total and Average Production, classified by Value of Product Group, 1929, 1939, 1944 and 1950-52

Gross Value Group	Establishments	Total Production	Average per Establishment	Establishments	Total Production	Average per Establishment
	1929[1]			1939[2]		
	No.	$	$	No.	$	$
Under $25,000	14,024	106,735,470	7.611	15,623	120,903,054	7,739
$ 25,000 but under $ 50,000	2,802	99,529.725	35,521	2,803	99,558,383	35,519
50,000 " 100,000	2,209	156,308,744	70,760	2,215	156,410,769	70,614
100,000 " 200,000	1,688	237,532,492	140,718	1,584	225,582,130	142,413
200,000 " 500,000	1,519	504,218,217	331.941	1,285	390,626,844	303,990
500,000 " 1,000,000	636	443,597,677	697,481	689	466,441,130	676,983
1,000,000 " 5,000,000	601	1,217,866,089	2,026,400	520	1,091,293,939	2,098,642
5,000,000 or over	118	1,298,198,865	11.001,685	81	923,724,311	11,404,004
Totals and Averages	**23,597**	**4,063,987,279**	**172,225**	**24,800**	**3,474,540,560**	**140,102**
	1944			1950[3]		
	No.	$	$	No.	$	$
Under $25,000	13,942	128,782,147	9,237	16,100	145,592,152	9,043
$ 25,000 but under $ 50,000	4,011	143,023,914	35,658	4,820	172,772,167	35,845
50,000 " 100,000	3,442	245,273,500	71,259	4,529	324,361,092	71,619
100,000 " 200,000	2,513	355,235,489	141,359	3,586	510,250,226	142,289
200,000 " 500,000	2,256	714,546,348	316,731	3,278	1,029,829,371	314,164
500,000 " 1,000,000	943	661,670,696	701,666	1,582	1,112,819,210	703,425
1,000,000 " 5,000,000	1,089	2,294,546,053	2,107,021	1,577	3,374,117,833	2,139,580
5,000,000 or over	287	4,530,614,372	15,786,113	470	7,147,784,330	15,208,051
Totals and Averages	**28,483**	**9,073,692,519**	**318,565**	**35,942**	**13,817,526,381**	**384,439**
	1951[3]			1952[3]		
	No.	$	$	No.	$	$
Under $25,000	15,795	144,070,647	9,121	16,123	147,968,877	9,178
$ 25,000 but under $ 50,000	5,008	180,206,518	35,984	5,116	183,103,579	35,790
50,000 " 100,000	4,767	342,573,146	71,863	4,834	346,482,743	71,676
100,000 " 200,000	3,919	555,921,461	141,853	3,939	559,681,909	142,087
200,000 " 500,000	3,543	1,119,627,024	316,011	3,759	1,188,144,845	316,080
500,000 " 1,000,000	1,657	1,169,467,365	705,774	1,761	1,230,769,856	698,904
1,000,000 " 5,000,000	1,764	3,735,332,441	2,117,535	1,839	3,936,369,518	2,140,495
5,000,000 or over	568	9,144,988,530	16,100,332	558	9,390,165,708	16,828,254
Totals and Averages	**37,021**	**16,392,187,132**	**442,781**	**37,929**	**16,982,687,035**	**447,749**

[1] Includes central electric stations and dyeing, cleaning and laundry establishments. [2] Excludes the Yukon and Northwest Territories. [3] Includes Newfoundland.

Size as Measured by Number of Employees.—In 1929, establishments employing 501 or more persons accounted for 27 p.c. of the total number of employees engaged in manufacturing. The tendency then in evidence of increasing concentration of production into larger units was checked by the depression, the proportion decreasing in 1933 to 21 p.c. (central electric stations included) but rising again to 26 p.c. in 1939. The same also held true for establishments employing 101 or more persons. In 1929 they employed 62 p.c. of the total, in 1933, 56 p.c., and in 1939, 62 p.c.

The effect of World War II on the concentration of industries into large units is illustrated by the increase in the number of establishments employing 501 or more hands. In 1939 such establishments numbered 172 and employed 26 p.c. of the employees engaged in manufacturing; by 1944 the number had increased to 383 and the percentage of total employees to 47. In a further subdivision of this group in 1944 it was found that 226 establishments employed between 500 and 999 persons, 56 between 1,000 and 1,499, and 101 employed over 1,500. There were 12 plants employing over 7,000 persons, the largest having an employment of slightly over 13,000.

As a result of the resumption of peace-time production, the larger establishments declined in size so that, by 1952, only 76 establishments employed over 1,500 persons. The two largest plants employed over 12,000 persons, the next employed over 11,000, followed by three employing over 9,000 and six between 5,000 and 9,000 persons.

32.—Manufacturing Establishments, classified by Number of Employees and by Province, 1951 and 1952

Year, Province or Territory	Employees—					
	Up to 499	500 to 799	800 to 999	1,000 to 1,499	1,500 or Over	Total
	No.	No.	No.	No.	No.	No.
1951						
Newfoundland	820	—	—	1	1	822
Prince Edward Island	237	—	—	—	—	237
Nova Scotia	1,465	4	—	4	1	1,474
New Brunswick	1,074	6	2	1	1	1,084
Quebec	11,726	62	23	26	24	11,861
Ontario	12,840	88	33	29	35	13,025
Manitoba	1,505	3	1	—	3	1,512
Saskatchewan	973	—	—	—	—	973
Alberta	2,114	3	—	1	—	2,118
British Columbia	3,872	15	5	3	2	3,897
Yukon and Northwest Territories	18	—	—	—	—	18
Canada, 1951	**36,644**	**181**	**64**	**65**	**67**	**37,021**
1952						
Newfoundland	946	—	—	1	1	948
Prince Edward Island	224	—	—	—	—	224
Nova Scotia	1,523	4	1	1	4	1,533
New Brunswick	1,068	5	2	1	1	1,077
Quebec	11,893	61	25	26	19	12,024
Ontario	12,982	93	23	28	46	13,172
Manitoba	1,522	4	—	2	3	1,531
Saskatchewan	1,022	—	—	—	—	1,022
Alberta	2,144	4	1	1	—	2,150
British Columbia	4,200	14	4	5	2	4,225
Yukon and Northwest Territories	23	—	—	—	—	23
Canada, 1952	**37,547**	**185**	**56**	**65**	**76**	**37,929**

33.—Establishments and Employees in Manufactures, classified by Number of Employees per Establishment, 1929, 1939, 1944, and 1950-52

Employee Group	Estab-lishments	Employees	Average per Estab-lishment	Estab-lishments	Employees	Average per Estab-lishment
	1929[1]			1939[2]		
	No.	No.	No.	No.	No.	No.
Under 5 employees........	12,273	30,446	2·5	13,002	28,020	2·2
5 to 20 "	6,160	62,310	10·1	6,985	68,151	9·8
21 " 50 "	2,531	81,846	32·3	2,330	75,324	32·3
51 " 100 "	1,262	90,238	71·5	1,158	81,646	70·5
101 " 200 "	745	103,944	139·5	695	97,063	139·7
201 " 500 "	444	136,397	307·2	458	139,687	305·0
501 or over.................	182	189,253	1,040·0	172	168,168	977·7
Totals and Averages.....	**23,597**	**694,434**	**29·4**	**24,800**	**658,059**	**26·5**
	1944			1950[3]		
	No.	No.	No.	No.	No.	No.
Under 5 employees........	13,208	29,958	2·3	16,726	34,719	2·1
5 to 14 "	7,111	58,404	8·2	9,103	75,149	8·3
15 " 49 "	4,615	124,408	27·0	6,022	160,397	26·6
50 " 99 "	1,622	113,869	70·2	1,920	133,374	69·5
100 " 199 "	900	126,192	140·2	1,121	156,489	139·6
200 " 499 "	644	196,707	305·4	709	216,593	305·5
500 " 999 "	383	573,344	1,497·0	341	395,304	1,159·2
1,000 or over..............						
Head offices[4]..............	—	—	—	—	11,272	—
Totals and Averages.....	**28,483**	**1,222,882**	**42·9**	**35,942**	**1,183,297**	**32·9**
	1951[3]			1952[3]		
	No.	No.	No.	No.	No.	No.
Under 5 employees........	17,044	35,441	2·1	16,990	36,754	2·2
5 to 14 "	9,591	79,656	8·3	9,688	79,975	8·2
15 " 49 "	6,203	165,113	26·6	6,280	167,897	26·7
50 " 99 "	1,960	136,274	69·5	1,985	138,080	69·6
100 " 199 "	1,107	154,222	139·3	1,122	156,902	139·8
200 " 499 "	739	225,036	304·5	719	221,507	308·1
500 " 999 "	248	172,347	694·9	241	165,139	685·2
1,000 or over..............	129	277,364	2,150·0	141	308,099	2,185·1
Head offices[4]..............	—	12,922	—	—	14,029	—
Totals and Averages.....	**37,021**	**1,258,375**	**34·0**	**37,929**	**1,288,382[5]**	**34·0**

[1] Includes central electric stations and dyeing, cleaning and laundry establishments. [2] Excludes the Yukon and Northwest Territories. [3] Includes Newfoundland. [4] Includes only those head offices that are not located at a plant. [5] Includes 763 employees who are not classifiable.

Size of Establishment in Leading Industries.—Table 34 summarizes the degree of concentration in some of the leading industries of Canada. Concentration is extremely marked in the case of motor-vehicles, non-ferrous metal smelting and refining, railway rolling-stock, cotton yarn and cloth, primary iron and steel, pulp and paper and heavy electrical machinery. On the other hand, the degree of concentration is low in such industries as women's factory clothing, miscellaneous food preparations, furniture, butter and cheese, bread and other bakery products, fruit and vegetable preparations, sawmills and men's factory clothing.

34.—Percentage Importance of Establishments, each Employing 200 or more Persons, in the 25 Leading Industries, 1951 and 1952

	Industry	1951			1952		
		Number of Establishments Employing 200 or More Persons	Percentage of Total Establishments in the Industry	Percentage of Total Production in the Industry	Number of Establishments Employing 200 or More Persons	Percentage of Total Establishments in the Industry	Percentage of Total Production in the Industry
1	Pulp and paper	75	59·5	92·5	77	60·2	94·2
2	Slaughtering and meat packing	27	17·4	72·2	28	18·2	74·8
3	Non-ferrous metal smelting and refining	16	94·1	98·1	17	100·0	100·0
4	Motor-vehicles	9	47·4	98·3	8	42·1	98·0
5	Petroleum products	13	25·0	85·0	14	25·5	82·5
6	Sawmills	27	0·4	30·8	21	0·3	24·5
7	Primary iron and steel	32	56·1	94·4	30	51·7	94·3
8	Butter and cheese	18	1·1	18·6	19	1·2	21·6
9	Railway rolling-stock	24	64 8	95 9	24	66·7	96·0
10	Rubber goods, including footwear	21	31·3	86·6	21	30·0	93·5
11	Clothing, men's factory	28	4·8	33·8	36	6·1	38·5
12	Motor-vehicle parts	22	13·7	81·3	24	14·0	81·9
13	Flour mills	9	8·4	50·6	9	9·1	49·7
14	Miscellaneous food preparations	3	0·9	13·1	3	0·9	13·6
15	Bread and other bakery products	23	0·9	28·8	23	0·9	28·5
16	Aircraft and parts	11	47·8	95·0	12	31·6	97·2
17	Machinery, heavy electrical	16	32·0	90·2	16	30·8	89·2
18	Machinery, industrial	29	9·7	54·8	30	9·5	59·4
19	Cotton yarn and cloth	30	55·5	94·4	30	52·6	92·9
20	Electrical apparatus and supplies, miscellaneous	13	9·2	45·4	16	11·0	77·0
21	Printing and publishing	28	3·0	65·5	30	3·7	66·5
22	Clothing, women's factory	7	0·7	6·4	12	1·4	9·2
23	Sheet metal products	28	10·1	68·5	24	7·9	61·6
24	Fruit and vegetable preparations	6	0·2	30·4	4	0·9	28·6
25	Agricultural implements	9	11·1	88·8	8	9·4	89·5

PART III.—PROVINCIAL AND LOCAL DISTRIBUTION OF MANUFACTURING PRODUCTION

Section 1.—Provincial Distribution of Manufacturing Production

Ontario and Quebec are by far the most important manufacturing provinces of Canada. Their combined production in 1952 amounted to $13,548,408,451 or 80 p.c. of the total gross value of manufactured products as determined by factory shipments.

Table 1 shows the predominance of these two Provinces in most of the industrial groups. In 1952, Quebec led in the manufacture of tobacco and tobacco products, textiles (except clothing), clothing (textile and fur), leather products, paper products and products of petroleum and coal. In the production of wood products, British Columbia with 38 p.c. held the dominant position, outranking both Ontario and Quebec which accounted for 26 and 21 p.c., respectively, of total production. In each of the other industrial groups, Ontario led by a wide margin.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1951 and 1952

Province and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	1951						1952					
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Newfoundland												
Food and beverages	75	3,413	5,105,057	13,398,634	12,182,314	26,470,584	77	3,319	5,447,180	13,473,827	10,973,710	25,200,071
Textile products (except clothing)	5	103	205,286	555,276	562,822	1,136,352	5	95	214,141	524,744	502,634	1,044,991
Clothing (textile and fur)	5	306	360,758	435,754	501,953	946,755	3	210	287,235	399,106	400,027	805,462
Wood products	666	1,445	1,311,581	3,036,950	2,681,859	5,836,337	790	1,838	1,885,417	4,339,012	3,425,874	7,916,282
Paper products	3	3,279	13,392,916	23,133,696	34,174,834	59,958,553	3	3,538	14,420,551	23,876,477	36,359,335	62,812,294
Printing, publishing and allied industries	30	378	924,009	394,288	1,270,863	1,702,273	29	402	994,249	432,106	1,430,900	1,902,464
Iron and steel products	8	247	569,747	388,511	839,541	1,267,625	9	273	661,696	499,114	958,327	1,502,120
Transportation equipment	7	115	201,420	226,266	281,715	513,445	6	77	141,140	112,114	184,354	305,456
Non-metallic mineral products	13	110	205,035	304,852	329,935	676,960	15	284	627,149	573.699	741,381	1,540,752
Chemicals and allied products	6	74	159,912	659,436	315,925	988,021	5	75	187,565	637,423	545,434	1,197,423
Miscellaneous industries[2]	4	152	245,525	583,636	548,426	1,145,708	6	192	367,528	609,998	587,038	1,232,369
Totals, Newfoundland	**822**	**9,622**	**22,681,246**	**43,117,299**	**53,690,187**	**100,642,613**	**948**	**10,303**	**25,233,851**	**45,477,620**	**56,109,014**	**105,459,684**
Prince Edward Island												
Food and beverages	125	1,066	1,481,952	13,613,570	3,210,597	17,055,728	118	1,088	1,606,793	12,564,752	3,521,200	16,340,543
Textile products (except clothing)	3	62	94,817	1,411,862	213,084	1,630,720	3	63	100,541	867,372	303,645	1,177,279
Wood products	84	260	254,191	632,293	473,131	1,125,796	80	239	254,011	601,474	465,580	1,086,625
Printing, publishing and allied industries	9	155	297,629	147,953	443,907	603,953	9	155	323,865	160,292	469,790	641,965
Iron and steel products	5	116	192,989	243,341	239,717	498,747	4	46	87,155	214,056	224,450	444,019
Transportation equipment	4	6	2,980	3,210	4,075	7,855	3	131	287,132	220,070	393,466	628,699
Miscellaneous industries[3]	7	70	134,995	1,125,519	462,286	1,600,640	7	73	146,125	1.158,383	578,966	1,750,541
Totals, Prince Edward Island	**237**	**1,735**	**2,459,553**	**17,177,748**	**5,046,797**	**22,523,439**	**224**	**1,795**	**2.805,622**	**15,786,399**	**5,957,097**	**22,069,671**

For footnotes, *see* end of table, p. 694.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1951 and 1952—continued

Province and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	1951						1952					
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Nova Scotia												
Food and beverages	402	7,719	12,494,176	49,348,952	26,552,190	77,428,134	393	8,329	13,972,303	51,909,912	28,673,609	82,280,113
Leather products	4	108	166,083	343,644	301,276	649,220	4	104	163,251	238,107	276,759	518,761
Textile products (except clothing)	11	771	1,621,745	5,409,170	3,909,543	9,476,112	10	711	1,585,264	4,731,690	3,546,290	8,432,321
Clothing (textile and fur)	15	1,329	1,975,024	5,226,468	2,651,045	7,992,229	14	1,391	2,120,438	5,192,952	3,809,681	9,132,545
Wood products	735	4,949	6,931,740	19,595,848	12,847,652	32,936,410	797	5,057	7,245,421	18,999,129	13,299,865	32,824,769
Paper products	7	1,321	4,022,324	7,274,116	11,551,343	20,237,327	7	1,370	4,296,133	8,457,870	11,963,591	21,828,287
Printing, publishing and allied industries	120	1,269	2,627,540	2,015,544	5,032,427	7,144,949	123	1,270	2,787,843	1,999,708	5,444,343	7,548,666
Iron and steel products	48	6,895	18,422,472	29,820,804	26,763,301	61,473,647	51	7,702	22.231,148	31,605,557	26,279,400	63,086,782
Transportation equipment	69	4,051	10,082,041	19,922,069	16,367,863	36,836,475	67	5,339	14,525,828	24,216,850	22,023,951	46,902,365
Non-metallic mineral products	26	628	1,297,049	1,083,537	2,841,182	4,430,322	27	615	1.415,754	1,460,165	2.900,302	4,912,086
Products of petroleum and coal	3	980	3,171,338	28,309,003	7,705,699	38,093,255	3	958	3,606,054	30,818,621	8,948,170	42,100,066
Chemicals and allied products	15	296	758,746	3,465,724	2,517,769	6,137,001	16	299	822,769	3,325,349	2,758,377	6,249,043
Miscellaneous industries[4]	19	196	405,476	300,457	445,340	784,153	21	226	473,181	185,456	790,662	1,023,943
Totals, Nova Scotia	**1,474**	**30,512**	**63,975,754**	**172,115,336**	**119,486,630**	**303,619,234**	**1,533**	**33,371**	**75,245,387**	**183,141,366**	**130,715,000**	**326,839,747**
New Brunswick												
Food and beverages	355	6.943	11,247,871	82,878,424	26,143,202	110,882,568	351	6,806	11,864,463	74,403,210	29,163,160	105,525,075
Leather products	12	328	537,005	1,522,874	981,186	2.520,173	12	352	602,060	1,335,402	1,160,103	2,515,864
Textile products (except clothing)	16	2,043	4,315,183	9,169,356	6,697,059	16,179,609	16	1,865	3,585,022	5,959,519	4,658,573	10,908,256
Clothing (textile and fur)	6	98	118,943	192,305	154,306	349,130	6	94	118,954	164,186	147,175	313,945
Wood products	533	4,863	8,005,835	20,605,474	14,111,208	35,168,531	525	4,515	7,637,591	19,896,076	13,964,274	34,317,244
Paper products	14	4,052	14,689,808	41,039,557	49,629,344	97,011,008	14	3,987	15,260,621	41,703,570	40,856,979	89,215,300
Printing, publishing and allied industries	64	866	1,802,399	1,119,369	3,010,821	4,209,129	67	938	2,023,405	1,321,748	3,479,476	4,883,219
Iron and steel products	29	1,206	2,914,959	4,863,579	5,320,003	10,375,885	29	1,178	3,155,740	5,272,130	5,939,301	11,427,294
Transportation equipment	11	2,674	6,463,526	7,906,366	7,050,624	15,286,939	11	2,925	7,586,007	7,907,375	9,640,044	17,863,623
Non-metallic mineral products	24	375	842,008	1,347,153	2,239,095	4,001,943	23	515	1,352,211	1,676,648	3,044,588	5,666,031
Chemicals and allied products	7	132	330,996	2,785,704	852,377	3,692,802	7	158	448.120	2,957,217	1,279,133	4,297,093
Miscellaneous industries[5]	13	925	2,278,349	2,928,703	4,405,730	7,495,787	16	918	2,344,268	2,163,793	4,504,665	6,826,838
Totals, New Brunswick	**1,084**	**24,505**	**53,546,882**	**176,358,864**	**120,594,955**	**307,173,504**	**1,077**	**24,251**	**55,978,462**	**164,760,874**	**117,837,471**	**293,759,782**

Quebec												
Food and beverages	2,692	42,677	93,949,971	610,084,307	248,149,436	870,082,103	2,651	43,882	104,511,455	602,595,390	279,540,314	894,416,904
Tobacco and tobacco products	38	7,800	20,280,534	61,800,486	50,157,594	112,307,742	38	7,336	21,041,422	71,815,464	66,652,121	132,844,059
Rubber products	24	7,184	17,423,541	24,938,363	28,790,508	54,504,987	26	6,139	16,284,215	22,280,838	29,677,642	52,695,709
Leather products	376	16,505	28,328,584	54,123,288	41,770,858	96,455,777	373	17,439	32,689,985	53,140,219	50,763,961	104,527,968
Textile products (except clothing)	410	46,853	103,729,626	263,393,294	185,190,074	456,085,491	426	40,217	98,668,596	216,479,162	167,980,926	391,704,853
Clothing (textile and fur)	1,760	66,356	123,042,915	233,449,850	215,995,017	451,385.849	1,761	68,578	135,164,476	256,909,677	240,334,409	499,253,391
Wood products	3,402	32,809	59,544.724	136,150,070	106,650,947	245,742,191	3,376	32,207	63,058,559	139,094,480	108,265,540	250,470.548
Paper products	184	32,916	107,805,568	276,155,679	320,554,707	635,187,414	182	32,373	112,797,702	286,617,502	291,411,210	617,797,239
Printing, publishing and allied industries	1,064	16,988	44,160,737	41,525,364	76,372,410	118,753,394	1,123	17,501	48,732,647	44,737,185	86,145,435	131,781,750
Iron and steel products	556	41,897	117,810,838	158,102.712	210,704,557	377,094,686	607	43,456	136,688,752	182,321,966	254,097,847	444,843,225
Transportation equipment	106	31,016	85,105,600	119,943,948	105,580,217	229,059,337	119	42,011	122,154,810	175,952,017	166,651,190	346,745,695
Non-ferrous metal products	158	16,407	48,754,139	285,375,990	127,395,511	439,395,936	170	17,893	56,446,911	273,540,186	146,155,174	449,728,502
Electrical apparatus and supplies	76	18,611	52,751,108	78,932,314	91,855,377	172,319,956	83	19,104	59,385,171	73,340,961	98,958,684	173,766,802
Non-metallic mineral products	283	9,193	23,771,284	32,314,948	56,523,276	99,303,025	292	9,430	26,330,376	34,494,499	57,410,356	102,538,532
Products of petroleum and coal	13	3,351	11,427,570	191,756,322	64,077,116	267,814,499	17	3,665	13,782,117	184,056,167	88,379,304	284,943,192
Chemicals and allied products	339	18,382	50,654,738	103,605,293	122,869,316	233,719,861	346	19,604	58,228,015	101,063,826	124,797,630	232,829,744
Miscellaneous industries	380	8,237	17,060,203	24,986,418	31,296,830	56,945,171	434	8,863	19,979,494	27,178,574	37,421,536	65,346,712
Totals, Quebec	**11,861**	**417,182**	**1,005,601,680**	**2,696,638,646**	**2,083,933,751**	**4,916,157,419**	**12,024**	**429,698**	**1,125,944,703**	**2,745,618,113**	**2,288,643,279**	**5,176,234,825**
Ontario												
Food and beverages	3,089	69,531	165,907,880	948,643,352	424,366,076	1,391,957,349	3,003	70,677	181,321,491	912,694,477	474,898,564	1,407,525,674
Tobacco and tobacco products	20	1,883	3,921,151	57,228,474	8,335,889	65,756,004	19	1,807	4,107,403	72,222,438	9,640,631	82,074,914
Rubber products	37	15,825	46,832,708	121,981,566	132,244,763	256,983,995	39	15,403	49,083,910	98,486,975	132,633,175	233,735,185
Leather products	251	13,378	28,366,500	73,170,018	38,026,766	112,428,023	247	12,926	30,184,797	55,656,859	45,321,316	102,230,921
Textile products (except clothing)	375	30,107	71,445,451	197,482,788	135,254,836	337,792,692	377	28,051	70,812,946	174,167,242	129,388,344	308,647,722
Clothing (textile and fur)	1,013	38,800	80,496,204	132,559,992	124,852,909	259,093,661	986	38,453	84,986,036	143,922,338	130,977,072	276,607,409
Wood products	2,672	36,657	79,856,745	144,142,923	135,155,404	282,780,362	2,681	36,320	85,105,608	154,331,327	143,919,298	302,026,688
Paper products	267	32,445	106,323,628	261,444,514	295,350,337	579,360,978	263	32,514	111,522,670	253,155,865	258,425,166	532,919,908
Printing, publishing and allied industries	1,641	32,969	91,256,234	84,550,472	157,080,008	243,591,735	1,682	32,190	98,337,662	86,434,212	172,064,456	260,478,323
Iron and steel products	1,247	117,135	362,390,696	599,773,775	662,930,499	1,299,523,236	1,352	120,132	402,148,296	653,605,604	753,139,807	1,443,168,507
Transportation equipment	237	70,188	225,573,390	683,679,966	480,023,097	1,171,884,153	241	79,948	279,900,430	751,620,906	520,288,270	1,281,285,205
Non-ferrous metal products	306	27,692	82,906,847	322,748,682	256,892,371	598,631,892	307	26,862	88,921,996	310,605,712	249,564,745	580,332,492
Electrical apparatus and supplies	247	47,681	138,733,370	230,639,879	255,317,000	490,151,476	261	48,533	154,292,664	232,082,332	288,585,822	525,284,664
Non-metallic mineral products	490	16,510	47,742,385	59,548,181	106,503,220	180,848,596	488	15,756	49,454,872	59,911,633	107,535,729	181,930,849
Products of petroleum and coal	30	7,882	26,375,744	142,543,034	66,530,591	220,884,128	36	8,303	31,129,861	161,661,705	71,979,782	246,583,557
Chemicals and allied products	513	22,762	67,419,867	217,922,907	212,596,448	447,264,455	538	23,503	75,359,662	212,188,860	237,757,625	466,018,240
Miscellaneous industries	590	17,988	43,838,182	56,333,844	77,939,851	135,798,482	652	18,318	47,516,101	54,682,918	84,986,774	141,323,368
Totals, Ontario	**13,025**	**599,433**	**1,669,386,982**	**4,334,394,367**	**3,569,400,065**	**8,074,731,217**	**13,172**	**609,696**	**1,844,186,405**	**4,387,431,403**	**3,811,106,576**	**8,372,173,626**

For footnotes, *see* end of table, p. 694.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1951 and 1952—continued

Province and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	1951						1952					
	No.	No.	$	$	$	$	No	No.	$	$	$	$
Manitoba												
Food and beverages	362	9,562	24,448,189	189,035,487	58,152,796	249,714,120	367	9,941	26,516,058	178,636,866	64,584,380	245,662,067
Leather products	29	716	1,201,385	3,735,315	2,031,586	5,799,701	27	717	1,327,879	3,121,518	2,242,035	5,397,640
Textile products (except clothing)	25	844	1,624,955	8,712,742	2,877,131	11,649,992	26	787	1,569,927	7,560,959	3,101,644	10,725,181
Clothing (textile and fur)	165	6,083	11,386,036	23,218,051	18,213,849	41,597,542	159	6,298	12,497,486	27,450,708	20,351,729	47,959,463
Wood products	322	3,118	6,494,451	13,028,441	11,183,704	24,501,739	342	3,330	7,605,901	15,981,691	13,036,726	29,340,345
Paper products	21	1,370	3,961,724	11,351,157	14,889,803	27,274,150	21	1,364	4,137,209	11,515,144	14,244,480	26,824,474
Printing, publishing and allied industries	280	3,714	8,865,980	7,813,524	15,871,733	23,901,511	273	3,856	9,619,921	8,554,092	17,153,224	25,929,483
Iron and steel products	112	4,899	13,252,922	17,004,394	26,898,294	44,843,490	120	5,243	15,492,882	19,826,108	30,520,792	51,309,495
Transportation equipment	22	7,215	19,296,284	20,730,683	20,890,924	42,341,851	23	7,754	22,172,832	25,469,695	24,081,824	50,217,104
Non-ferrous metal products	19	463	1,369,016	20,798,001	−197,646	21,134,934	17	682	2,344,399	13,522,793	1,947,981	16,315,436
Electrical apparatus and supplies	18	698	1,515,509	3,866,371	3,541,017	7,476,642	18	699	1,559,881	4,264,444	4,104,575	8,437,469
Non-metallic mineral products	41	907	2,329,910	3,399,444	6,930,042	11,821,314	38	851	2,401,082	3,321,210	7,876,567	12,498,737
Products of petroleum and coal	5	533	1,542,057	18,105,182	3,864,512	22,960,245	6	552	1,915,808	20,354,471	5,671,537	27,222,765
Chemicals and allied products	42	735	1,648,868	7,310,831	5,366,330	12,819,198	43	726	1,750,973	6,960,325	5,505,452	12,601,574
Miscellaneous industries[6]	49	602	1,233,680	1,093,989	2,334,592	3,509,617	51	565	1,235,334	1,124,626	2,391,360	3,595,979
Totals, Manitoba	**1,512**	**41,459**	**100,170,966**	**349,203,612**	**192,848,667**	**551,346,046**	**1,531**	**43,365**	**112,147,572**	**347,664,650**	**216,814,306**	**574,037,212**
Saskatchewan												
Food and beverages	222	5,003	12,297,608	100,645,066	31,036,221	133,231,555	225	5,110	13,616,023	94,117,855	38,004,787	133,742,853
Leather products	[7]	[7]	[7]	[7]	[7]	[7]	3	12	27,478	52,880	11	56,181
Textile products (except clothing)	5	115	238,450	1,673,007	331,460	2,018,652	7	136	293,948	1,216,734	308,084	1,540,040
Clothing (textile and fur)	15	209	387,871	812,814	752,811	1,572,923	15	214	481,419	933,361	946,242	1,888,632
Wood products	434	1,706	2,632,964	5,068,882	5,380,088	10,627,539	466	1,723	3,014,207	5,800,872	6,550,768	12,550,690
Paper products	4	20	44,573	39,170	112,955	153,150	4	25	55,750	63,648	142,520	208,062
Printing, publishing and allied industries	182	1,432	3,316,025	2,119,925	5,265,611	7,495,948	182	1,477	3,570,945	2,463,343	5,782,921	8,360,783
Iron and steel products	49	708	1,593,176	3,137,589	2,600,009	5,834,296	52	758	2,013,029	3,739,849	3,569,110	7,432,233
Transportation equipment	6	26	77,131	100,835	148,170	255,323	7	28	73,993	120,535	151,183	277,873
Non-metallic mineral products	27	365	934,487	1,023,052	2,242,603	3,439,824	30	440	1,157,452	998,454	2,520,518	3,742,767

Products of petroleum and coal	8	764	2,470,190	36,189,669	9,317,334	46,902,653	10	848	3,207,440	37,055,526	12,477,870	51,261,972
Chemicals and allied products	8	163	500,009	994,356	819,704	1,842,123	8	160	540,034	530,857	714,927	1,270,308
Miscellaneous industries[8]	13	512	1,797,810	33,347,090	3,081,640	37,439,040	13	376	1,438,144	25,294,205	9,765,216	36,599,382
Totals, Saskatchewan	**973**	**11,023**	**26,290,294**	**185,151,455**	**61,088,606**	**250,813,026**	**1,022**	**11,307**	**29,489,862**	**172,388,119**	**80,934,157**	**258,931,776**
Alberta												
Food and beverages	417	9,537	23,847,300	189,955,325	54,939,830	246,955,138	413	10,415	27,462,379	193,498,314	63,557,265	259,318,747
Leather products	11	60	108,488	122,376	148,565	273,173	11	62	119,624	123,716	132,375	258,320
Textile products (except clothing)	12	165	304,828	2,681,606	619,700	3,314,362	16	188	382,851	2,326,953	505,413	2,846,405
Clothing (textile and fur)	31	973	1,741,439	4,378,407	2,802,104	7,202,106	29	959	1,855,806	4.061,064	3,528,218	7,611,852
Wood products	1,111	6,613	11,343,241	29,842,150	20,577,822	51,207,703	1,115	6,770	12,781,437	32,719,866	24,052,046	57,614,363
Paper products	8	203	510,732	1,993,868	1,402,296	3,420,422	8	290	829,219	3,527,219	2,881,437	6,454,700
Printing, publishing and allied industries	244	2,041	4,849,132	4,087,784	9,360,997	13,547,826	243	2,106	5,581,171	4,401,058	11,405,197	15,917,517
Iron and steel products	118	2,718	7,300,975	8,446,821	12.383,121	21,089,553	132	2,965	8,856,067	11,527,923	15,029,515	26,865,104
Transportation equipment	22	2,742	7,499,983	8,313,244	7,936,616	16,507,533	24	3,337	9,699,413	10,471,301	10,896,858	21,610,398
Non-ferrous metal products	7	67	169,735	941,339	449,091	1,390,028	8	72	225,293	807,907	562,363	1,378,484
Electrical apparatus and supplies	4	16	37,977	73,236	120,469	195,757	4	32	78,316	246,818	210,137	465,188
Non-metallic mineral products	67	2,012	5,102,847	6,070,483	10,957,774	18,147,022	70	2,250	6,129,240	8,014,928	14,302,760	23,449,751
Products of petroleum and coal	11	1,037	3,542,452	48.929,517	12,100,423	62,779,632	16	1,334	5,359,984	55,763,985	22,750,836	81,009,131
Chemicals and allied products	24	613	1,965,484	2,867,162	6,274,323	9,891,475	24	650	2,187,580	3,605,491	6,609,079	11,030,815
Miscellaneous industries[6]	31	308	810,974	727,300	1,585,443	2,359,654	37	335	978,814	720,598	1,797,514	2,580,036
Totals, Alberta	**2,118**	**29,105**	**69,135,587**	**309,430,618**	**141,649,574**	**458,281,384**	**2,150**	**31,765**	**82,527,194**	**331,817,141**	**178,221,013**	**518,410,811**
British Columbia												
Food and beverages	644	17,025	42,052,495	221,553,032	100,450,968	326,137,658	660	15,971	43,300,311	199,133,794	98,963,775	302,372,613
Rubber products	4	35	85,959	28,427	131,226	167,272	3	32	91,730	27,630	162,694	199,788
Leather products	24	476	947,667	2,077,778	1,607,018	3,718,889	21	477	1,018,812	2,017,938	1,629,115	3,679,037
Textile products (except clothing)	30	647	1,450,148	4,815,001	2,280,738	7,193,321	32	626	1,476,230	4,688,143	2,331,881	7,114,597
Clothing (textile and fur)	73	1,579	2,855,757	5,073,477	4,748,183	9,871,830	68	1,471	3,027,822	4,923,204	4,596,785	9,578,507
Wood products	2,009	38,793	106,537,243	238,427,022	219,875,798	462,793,788	2,284	38,413	110,676,285	226,917,957	206,830,907	438,827,553
Paper products	39	7,283	25,769,733	61,056,896	100,259,343	167,239,160	41	7,504	29,362,428	65,273,106	79,932,424	152,088,527
Printing, publishing and allied industries	383	4,871	12,700,145	8,972,689	21,890,577	31,139,582	390	4,572	14,229,827	9,880,238	23,214,061	33,401,806
Iron and steel products	263	7,502	22,865,841	38,783,984	42,655,758	82,648,965	269	7,438	25,676,159	39,380,883	44,284,475	84,952,965
Transportation equipment	115	4,484	13,804,078	9,352,207	19,141,099	28,896,917	116	4,810	16,576,865	13,379,707	24,036,464	37,863,405
Non-ferrous metal products	41	4,532	14,625,693	133,419,048	16,810,296	152,559,667	46	4,623	16,531,248	120,181,711	4,561,153	127,689,668
Electrical apparatus and supplies	27	505	1,471,601	2,822,711	2,619,995	5,484,684	34	672	1,920,429	3,672,005	3,614,156	7,347,041
Non-metallic mineral products	69	1,409	3,828,741	3,906,280	6,732,843	12,140,659	72	1,269	3,926,617	4,752,251	7,311,816	13,704,945
Products of petroleum and coal	10	993	3,212,274	31,370,490	15,981,694	48,903,299	10	1,138	4,219,776	29,185,599	14,960,266	45,740,742
Chemicals and allied products	81	2,470	7,793,044	26,258,994	32,039,118	58,664,098	85	2,474	8,437,784	25,383,650	33,595,414	59,370,258
Miscellaneous industries[9]	85	1,043	2,625,864	1,922,381	5,223,911	7,320,552	94	1,177	3,058,653	2,213,432	6,146,926	8,550,410
Totals, British Columbia	**3,897**	**93,647**	**262,626,283**	**789,849,417**	**592,448,565**	**1,404,880,341**	**4,225**	**92,667**	**283,530,976**	**751,011,248**	**556,172,312**	**1,332,481,862**

For footnotes, *see* end of table, p. 694.

1.—Summary Statistics of Manufactures of Each Province, classified by Industrial Group, 1951 and 1952—concluded

Province and Industrial Group	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	1951						1952					
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Yukon and N.W.T.												
Food and beverages	5	17	26,936	50,649	57,254	115,578	5	14	31,599	60,657	63,394	132,290
Wood products	7	65	149,359	277,524	362,764	656,376	11	56	166,544	297,626	344,435	654,424
Printing, publishing and allied industries	[7]	[7]	[7]	[7]	[7]	[7]	3	18	49,180	9,805	72,370	88,875
Miscellaneous industries[10]	6	70	229,395	769,818	338,968	1,246,955	4	76	282,803	707,473	542,775	1,412,450
Totals, Yukon and N.W.T.	**18**	**152**	**405,690**	**1,097,991**	**758,986**	**2,018,909**	**23**	**164**	**530,126**	**1,075,561**	**1,022,974**	**2,288,039**

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[1] In 1952, gross value of production was replaced by value of factory shipments; *see* text, p. 633.

[2] In 1951, includes tobacco and tobacco products, and leather products; in 1952, includes tobacco and tobacco products, leather products and products of petroleum and coal. Figures for these industries are confidential and cannot be published separately.

[3] Includes tobacco and tobacco products, leather products, non-metallic mineral products and chemicals and allied products, figures for which are confidential and cannot be published separately.

[4] Includes electrical apparatus and supplies, figures for which are confidential and cannot be published separately.

[5] Includes non-ferrous metal products and products of petroleum and coal, figures for which are confidential and cannot be published separately.

[6] Includes rubber products, figures for which are confidential and cannot be published separately.

[7] Figures are confidential and are included in Miscellaneous Industries.

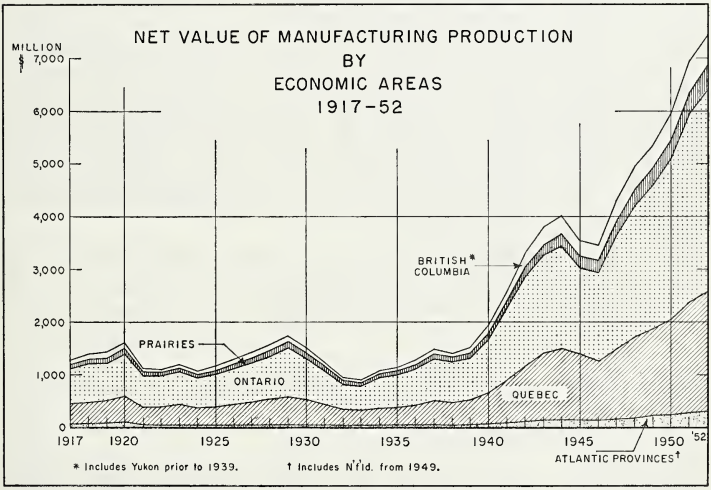
[8] In 1951, includes leather products and non-ferrous metal products; in 1952, includes non-ferrous metal products. Figures for these industries are confidential and cannot be published separately.

[9] Includes tobacco and tobacco products, figures for which are confidential and cannot be published separately.

[10] In 1951, includes printing, publishing and allied trades, non-ferrous metal products and products of petroleum and coal; in 1952, includes non-ferrous metal products, products of petroleum and coal, and chemicals and allied products. Figures for these industries are confidential and cannot be published separately.

2.—Concentration of Manufacturing Production in each Province, 1951 and 1952

Province or Territory	1951			1952		
	Number of Establishments Employing 500 or More Persons	Percentage of Total Number of Establishments in Province	Provincial Percentage of Number of Employees Accounted for by these Establishments	Number of Establishments Employing 500 or More Persons	Percentage of Total Number of Establishments in Province	Provincial Percentage of Number of Employees Accounted for by these Establishments
Newfoundland	2	0·2	32·6	2	0·2	33·2
Prince Edward Island	—	—	—	—	—	—
Nova Scotia	9	0·6	29·2	11	0·7	34·5
New Brunswick	10	0·9	34·4	9	0·8	33·0
Quebec	135	1·1	37·7	130	1·0	37·5
Ontario	185	1·4	39·6	190	1·4	41·0
Manitoba	7	0·5	21·4	9	0·5	24·8
Saskatchewan	—	—	—	—	—	—
Alberta	4	0·2	10·4	6	0·2	14·4
British Columbia	25	0·6	24·4	25	0·5	25·9
Yukon and Northwest Territories	—	—	—	—	—	—
Canada	**377**	**1·0**	**35·7**	**382**	**1·0**	**36·7**



Subsection 1.—The Manufactures of the Atlantic Provinces

In the Atlantic region the program of industrial development has been more selective than in some of the other provinces. Fish processing, new sawmills, increased pulp-making capacity and the manufacture of non-metallic building materials like cement and gypsum products have accounted for well over half of the industrial growth. There are, however, a few outstanding exceptions. Two sizable defence plants have been established in Nova Scotia, one to repair and overhaul naval aircraft and the other to build and repair radar and related electronic equipment. Considerable development has taken place in Newfoundland. Besides plants for the manufacture of cement and gypsum wallboard and plaster, factories for producing boots and shoes, birch veneer, cotton textiles, leather and optical goods, and industrial machinery, and a leather tannery were established, thus broadening the industrial base of the Province. With these exceptions, most of the developments in the Atlantic Provinces have been either small and scattered or confined to the modernization and expansion of manufacturing facilities that were already established at the close of World War II.

Considering the Atlantic Provinces as an economic unit, pulp and paper, fish processing, sawmills, and primary iron and steel accounted for about 44 p.c. of the total production.

In Newfoundland, manufacturing production is dominated by the pulp and paper and fish processing industries which in 1952 accounted for 70 p.c. of the total production of the Province. In Prince Edward Island, agricultural and fishery resources make butter and cheese, fish processing, and prepared stock and poultry feeds the leading industries.

Nova Scotia is renowned for its coal mines and its fisheries as well as extensive forests and agricultural lands and is favoured with easy access by sea to the high-grade iron-ore supply of Newfoundland. On these resources are based the leading manufactures of fish processing, primary iron and steel, railway rolling-stock, sawmills, pulp and paper, shipbuilding and repairs, and butter and cheese. In addition, important petroleum refineries, cotton yarn and cloth, and coke and gas plants add to the diversification of manufacturing in the Province. The forests of New Brunswick give a leading place to its pulp and paper and sawmilling industries. Other important manufacturing and processing is based on fishery and agricultural resources.

3.—Statistics of the Leading Industries of the Atlantic Provinces, 1951 and 1952

Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
	1951					
Newfoundland	No.	No.	$	$	$	$
1 Pulp and paper	3	3,279	13,392,916	23,133,696	34,174,834	59,958,553
2 Fish processing	38	2,289	2,963,153	6,721,353	7,031,299	14,377,533
3 Sawmills	557	949	581,691	1,308,366	1,354,163	2,727,335
4 Sash, door and planing mills	25	270	501,156	1,442,764	1,030,362	2,510,685
5 Bread and other bakery products	11	248	413,777	1,517,684	650,639	2,231,470
6 Breweries	3	126	308,581	502,514	1,447,323	2,016,821
7 Carbonated beverages	10	125	229,716	585,609	882,424	1,500,947
8 Printing and publishing	8	195	601,278	215,186	904,851	1,145,120
9 All other leading industries[2]	10	775	1,500,758	4,427,349	3,066,881	7,610,266
Totals, Leading Industries	**665**	**8,256**	**20,493,026**	**39,854,521**	**50,542,776**	**94,078,730**
Totals, All Industries	**822**	**9,622**	**22,681,246**	**43,117 299**	**53,690,187**	**100,642,613**

For footnotes, *see* end of table, p. 699.

3.—Statistics of the Leading Industries of the Atlantic Provinces, 1951 and 1952 —continued

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products
		1951—concluded					
		No.	No.	$	$	$	$
	Prince Edward Island						
1	Butter and cheese	23	149	269,070	3,543,433	548,422	4,148,856
2	Fish processing	55	457	399,711	2,102,110	760,749	2,906,915
3	Feeds, stock and poultry, prepared	11	57	96,395	1,251,903	235,650	1,503,892
4	Sawmills	78	160	117,962	311,747	285,926	610,578
5	Printing and publishing	4	138	286,405	139,359	430,451	580,712
6	Fruit and vegetable preparations	8	107	97,066	333,440	122,002	467,737
7	Bread and other bakery products	11	80	103,431	222,526	161,586	402,242
8	Sash, door and planing mills	3	63	84,050	269,060	126,387	401,307
9	Carbonated beverages	6	27	45,266	110,044	188,581	307,639
10	All other leading industries[3]	4	229	559,325	8,348,532	1,612,440	10,035,203
	Totals, Leading Industries	**203**	**1,467**	**2,058,681**	**16,632,154**	**4,472,194**	**21,365,081**
	Totals, All Industries	**237**	**1,735**	**2,459,553**	**17,177,748**	**5,046,797**	**22,523,439**
	Nova Scotia						
1	Primary iron and steel	5	4,837	13,254,893	20,341,735	14,854,317	39,512,061
2	Fish processing	203	4,003	6,043,585	25,650,791	12,576,436	38,818,949
3	Railway rolling-stock	3	1,213	3,081,343	15,667,273	7,649,245	23,581,101
4	Sawmills	594	3,312	4,178,684	12,685,703	8,553,417	21,534,108
5	Pulp and paper	4	1,143	3,727,099	6,302,882	10,876,491	18,574,028
6	Shipbuilding	20	2,128	5,514,441	3,714,699	6,905,138	10,866,436
7	Butter and cheese	23	562	1,083,890	6,026,646	2,357,608	8,598,012
8	Miscellaneous iron and steel products	4	905	2,421,394	4,715,292	3,091,745	8,182,758
9	Sash, door and planing mills	68	972	1,701,424	4,340,088	2,566,307	7,020,262
10	Bread and other bakery products	76	763	1,389,108	3,606,879	2,937,266	6,768,456
11	Printing and publishing	29	758	1,751,891	1,123,141	3,550,667	4,741,832
12	Knitted goods, other than hosiery	3	574	1,032,333	3,296,545	1,067,273	4,430,832
13	Confectionery	8	818	1,240,637	2,701,497	1,152,602	3,930,809
14	Carbonated beverages	30	300	522,511	1,212,895	1,958,852	3,272,920
15	Feeds, stock and poultry, prepared	9	84	135,762	2,653,893	440,063	3,111,596
16	Fruit and vegetable preparations	21	517	683,597	1,624,820	1,066,481	2,784,206
17	Miscellaneous food preparations, *n.e.s*	10	167	308,219	1,964,877	590,875	2,582,909
18	Fertilizers	3	65	130,554	1,690,708	558,158	2,262,710
19	Clothing, men's factory	7	380	443,760	1,326,860	803,506	2,144,744
20	All other leading industries[4]	8	2,147	6,048,974	36,069,807	19,659,832	58,061,069
	Totals, Leading Industries	**1,128**	**25,648**	**54,694,099**	**156,717,031**	**103,216,279**	**270,779,798**
	Totals, All Industries	**1,474**	**30,512**	**63,975,754**	**172,115,336**	**119,486,630**	**303,619,234**
	New Brunswick						
1	Pulp and paper	7	3,807	14,243,528	39,349,400	48,420,164	94,066,395
2	Sawmills	418	3,098	4,901,130	12,176,136	9,708,961	22,124,951
3	Fish processing	178	3,004	3,192,251	12,581,951	5,560,682	18,590,358
4	Slaughtering and meat packing	3	379	1,062,352	11,557,186	2,236,649	13,870,432
5	Miscellaneous food preparations, *n.e.s*	11	322	480,723	8,006,699	2,127,820	10,185,272
6	Butter and cheese	33	429	763,272	6,309,688	2,038,369	8,511,498
7	Sash, door and planing mills	64	1,093	1,994,733	5,485,299	2,754,793	8,342,059
8	Bread and other bakery products	68	774	1,427,808	3,476,798	2,689,289	6,409,317
9	Feeds, stock and poultry, prepared	11	158	333,553	5,306,499	620,528	5,971,900
10	Heating and cooking apparatus	3	690	1,697,709	2,205,485	2,639,293	4,961,813
11	Biscuits	3	378	749,266	2,122,276	1,969,218	4,150,475
12	Fertilizers	3	111	284,550	2,725,288	646,273	3,412,615
13	Printing and publishing	19	611	1,330,932	645,969	2,327,189	3,030,094
14	Miscellaneous wood products, *n.e.s*	6	220	396,952	1,755,487	579,828	2,392,400
15	Footwear, leather	4	296	489,140	1,401,705	919,326	2,334,770
16	All other leading industries[5]	12	6,213	14,866,340	50,492,077	24,961,027	76,915,627
	Totals, Leading Industries	**843**	**21,583**	**48,214,239**	**165,597,943**	**110,199,409**	**285,269,976**
	Totals, All Industries	**1,084**	**24,505**	**53,546,882**	**176,358,864**	**120.594,955**	**307,173,504**

For footnotes, *see* end of table, p. 699.

3.—Statistics of the Leading Industries of the Atlantic Provinces, 1952 and 1952 —continued

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments
		1952					
		No.	No.	$	$	$	$
	Newfoundland						
1	Pulp and paper	3	3,538	14,420,551	23,876,477	36,359,335	62,812,294
2	Fish processing	40	2,225	3,068,083	5,899,707	4,927,022	11,275,456
3	Sawmills	696	1,229	839,926	1,737,876	1,911,492	3,743,603
4	Sash, door and planing mills	29	326	629,079	2,216,025	1,107,870	3,354,669
5	Bread and other bakery products	11	221	478,093	1,734,392	880,936	2,679,398
6	Breweries	3	133	394,366	631,119	1,727,735	2,436,931
7	Carbonated beverages	10	149	280,439	689,369	1,166,502	1,892,895
8	Printing and publishing	7	222	649,955	230,381	952,757	1,209,327
9	All other leading industries[6]	11	784	1,709,133	5,314,183	3,453,899	8,908,372
	Totals, Leading Industries	**810**	**8,827**	**22,469,625**	**42,329,529**	**52,487,548**	**98,312,945**
	Totals, All Industries	**948**	**10,303**	**25,233,851**	**45,477,620**	**56,109,014**	**105,459,684**
	Prince Edward Island						
1	Butter and cheese	23	147	283,882	3,195,716	535,724	3,792,827
2	Fish processing	54	511	465,116	2,448,649	784,599	3,291,312
3	Feeds, stock and poultry, prepared	10	58	105,134	1,052,935	236,178	1,305,436
4	Printing and publishing	3	142	311,165	147,879	452,924	611,476
5	Fruit and vegetable preparations	6	80	96,376	335,702	224,947	578,420
6	Sawmills	74	137	106,664	291,021	275,061	578,047
7	Bread and other bakery products	10	73	105,635	218,955	178,516	415,767
8	Sash, door and planing mills	3	64	93,409	265,000	124,112	393,982
9	Carbonated beverages	6	29	50,597	127,255	177,208	319,657
10	All other leading industries[7]	6	398	957,699	7,298,129	2,570,668	9,957,420
	Totals, Leading Industries	**195**	**1,639**	**2,575,677**	**15,381,241**	**5,559,937**	**21,244,344**
	Totals, All Industries	**224**	**1,795**	**2,805,622**	**15,786,399**	**5,957,097**	**22,069,671**
	Nova Scotia						
1	Primary iron and steel	5	5,319	15,802,344	22,466,114	13,466,311	40,477,549
2	Fish processing	198	4,424	6,827,099	27,107,556	12,232,144	40,010,340
3	Railway rolling-stock	3	1,416	3,790,710	15,876,767	5,957,374	22,119,270
4	Shipbuilding	19	2,984	8,541,349	7,544,041	13,117,301	20,975,702
5	Sawmills	675	3,308	4,195,876	10,886,569	8,939,683	20,162,764
6	Pulp and paper	4	1,156	3,919,568	7,171,960	11,182,362	19,739,891
7	Miscellaneous iron and steel products	4	1,134	3,166,383	5,368,978	4,537,432	10,352,537
8	Butter and cheese	23	576	1,190,632	6,256,251	2,675,487	9,168,651
9	Sash, door and planing mills	58	1,040	1,898,942	5,392,742	2,498,972	7,998,690
10	Bread and other bakery products	75	809	1,589,567	3,872,059	3,416,295	7,535,187
11	Printing and publishing	29	733	1,865,900	1,161,464	3,812,218	5,047,846
12	Confectionery	8	986	1,493,013	2,794,365	1,812,732	4,688,168
13	Knitted goods, other than hosiery	3	626	1,108,778	2,527,844	1,680,574	4,286,273
14	Carbonated beverages	31	303	624,401	1,284,079	2,292,433	3,691,014
15	Clothing, men's factory	7	429	545,525	2,040,006	1,457,152	3,514,172
16	Feeds, stock and poultry, prepared	10	93	170,508	2,755,011	489,757	3,269,030
17	Fruit and vegetable preparations	17	470	609,531	1,867,180	1,239,513	3,196,737
18	Miscellaneous food preparations, *n.e.s*	9	173	315,934	1,849,831	735,858	2,613,372
19	Fertilizers	3	58	132,196	1,494,265	686,673	2,193,434
20	All other leading industries[8]	8	2,692	8,219,219	36,100,484	21,356,220	60,075,333
	Totals, Leading Industries	**1,189**	**28,729**	**66,007,475**	**165,817,566**	**113,586,491**	**291,115,960**
	Totals, All Industries	**1,533**	**33,371**	**75,245,387**	**183,141,366**	**130,715,000**	**326,839,747**

For footnotes, *see* end of table.

3.—Statistics of the Leading Industries of the Atlantic Provinces, 1951 and 1952 —concluded

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments
		1952—concluded					
		No.	No.	$	$	$	$
	New Brunswick						
1	Pulp and paper	7	3,759	14,785,530	40,125,924	39,780,761	86,515,912
2	Sawmills	409	2,918	4,550,238	11,587,413	8,986,159	20,816,235
3	Fish processing	176	2,769	3,092,225	12,577,032	4,779,666	17,773,491
4	Slaughtering and meat packing	3	368	1,145,027	10,062,605	1,934,347	12,077,162
5	Miscellaneous food preparations, *n.e.s*	11	334	502,946	6,911,262	2,692,355	9,642,283
6	Sash, door and planing mills	62	1,026	1,998,153	5,677,411	3,385,338	9,152,872
7	Butter and cheese	31	385	767,258	6,093,875	2,083,979	8,389,425
8	Bread and other bakery products	67	793	1,493,258	3,365,096	3,031,960	6,664,329
9	Feeds, stock and poultry, prepared	13	175	376,595	5,671,081	621,112	6,341,790
10	Heating and cooking apparatus	3	633	1,780,066	2,209,156	3,400,691	5,731,076
11	Fertilizers	3	135	383,316	2,893,957	1,057,113	3,998,476
12	Biscuits	3	373	707,596	1,688,781	2,008,024	3,741,783
13	Printing and publishing	19	634	1,403,219	674,716	2,664,294	3,396,585
14	Confectionery	3	362	625,826	1,283,396	1,044,109	2,365,596
15	Footwear, leather	4	316	541,978	1,225,516	1,072,988	2,315,353
16	Miscellaneous wood products, *n.e.s*	6	164	344,496	1,544,651	600,231	2,206,918
17	Carbonated beverages	20	216	447,133	763,111	1,331,235	2,164,280
18	All other leading industries[5]	12	6,247	15,466,023	41,095,772	27,922,052	70,558,574
	Totals, Leading Industries	852	**21,607**	**50,410,883**	**155,450,755**	**108,396,414**	**273,852,140**
	Totals, All Industries	**1,077**	**24,251**	**55,978,462**	**164,760,874**	**117,837,471**	**293,759,782**

[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633. [2] Includes: biscuits; cordage, rope and twine; dairy products, *n.e.s*; tobacco, cigars and cigarettes; miscellaneous food preparations, *n.e.s.* [3] Includes: bags, cotton and jute; fertilizers; slaughtering and meat packing. [4] Includes: breweries; cotton yarn and cloth; machinery, household, office and store; wire and wire goods; petroleum products; coke and gas. [5] Includes: breweries; sugar refineries; cotton yarn and cloth; synthetic textiles and silk; railway rolling-stock; shipbuilding; brooms, brushes and mops; brass and copper products; gypsum products. [6] Includes: miscellaneous food preparations, *n.e.s.*; biscuits; dairy products, *n.e.s.*; cordage, rope and twine; paints, varnishes and lacquers; tobacco, cigars and cigarettes. [7] Includes: slaughtering and meat packing; fertilizers; bags, cotton and jute; shipbuilding; sheet metal products. [8] Includes: petroleum products; coke and gas products; cotton yarn and cloth; wire and wire goods; breweries; aircraft and parts.

Subsection 2.—The Manufactures of Quebec

Quebec enjoys a wide variety of rich natural resources including most of the world's known reserves of asbestos, vast iron deposits, great reserves of copper, lead and zinc, the largest known supply of titanium, gold in abundance and new finds of oil underlying the rocks of Gaspe Peninsula. The geographic situation of the Province is extremely favourable to industrial development, one of its greatest assets being the St. Lawrence waterway and an inland harbour a thousand miles from the Atlantic Ocean where the largest sea-going vessels may dock. There is also an extensive highway system linking the small rural communities to the large cities.

Quebec, with 30 p.c. of Canada's total value of manufactured goods, is the second largest industrial province, having developed a $5,000,000,000 manufacturing output with such leading industries as pulp and paper, non-ferrous metal smelting and refining, petroleum products, slaughtering and meat packing, textiles and clothing, tobacco products, and railway rolling-stock. The leading industry is pulp and paper, which had an output of more than $500,000,000 in 1952. Quebec is a principal world centre for the production of newsprint; 55 major pulp and paper plants are concentrated in the Three Rivers and Shawinigan Falls districts and along the Saguenay, Ottawa and St. Lawrence Rivers. The Province accounts for 44 p.c. of the Canadian total for this industry. Other large industries in which Quebec predominates are: tobacco, cigars and cigarettes, with 93·5 p.c. of the

Canadian total; women's factory clothing, 68·2 p.c.; synthetic textiles and silk, 62·9 p.c.; cotton yarn and cloth, 62·4 p.c.; leather footwear, 60 p.c.; men's factory clothing, 56·5 p.c.; miscellaneous electrical apparatus and supplies, 48·3 p.c.; railway rolling-stock, 47·8 p.c.

The Province of Quebec, in common with the rest of Canada, experienced great industrial expansion following World War II. Two of the most important developments are the Ungava iron ore projects and the titanium industry. Production of non-ferrous metals expanded considerably; aluminum particularly made impressive strides, reaching a record output of 500,000 tons in 1952. The great asbestos industry was modernized and expanded. Additions to refining and storage facilities greatly increased the output of petroleum products. Noteworthy also is the establishment of many new furniture factories.

4.—Statistics of the Leading Industries of the Province of Quebec, 1951 and 1952

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
					1951		
		No.	No.	$	$	$	$
1	Pulp and paper	55	24,449	89,047,307	213,576,247	272,958,336	524,164,254
2	Non-ferrous metal smelting and refining	8	8,633	28,379,354	195,829,047	85,772,709	307,000,723
3	Petroleum products	7	2,435	8,536,072	181,887,987	55,578,547	247,592,260
4	Slaughtering and meat packing	37	4,017	11,421,690	167,526,238	23,484,242	191,929,652
5	Cotton yarn and cloth	21	18,161	37,396,638	117,210,947	62,258,723	182,144,774
6	Clothing, men's factory	347	17,838	33,259,007	75,246,359	60,047,109	135,669,021
7	Clothing, women's factory	554	18,800	35,874,994	69,916,157	64,109,789	134,331,439
8	Railway rolling-stock	10	15,572	41,560,420	73,083,300	50,028,360	125,431,372
9	Butter and cheese	750	5,647	11,144,098	90,248,436	19,273,585	111,500,086
10	Tobacco, cigars and cigarettes	33	7,290	19,396,681	59,244,465	48,954,619	108,517,654
11	Miscellaneous electrical apparatus and supplies	32	11,905	34,414,166	44,703,454	62,409,117	107,983,537
12	Synthetic textiles and silk	33	13,016	31,586,865	44,298,993	59,215,888	105,863,786
13	Sawmills	1,931	10,763	16,108,157	54,827,917	33,687,599	89,401,801
14	Miscellaneous food preparations, *n.e.s*	84	2,463	5,527,463	54,810,623	20,267,534	75,621,182
15	Bread and other bakery products	962	9,425	18,119,326	35,772,063	32,480,901	70,423,821
16	Footwear, leather	182	12,188	20,775,935	39,440,836	30,163,477	69,911,651
17	Brass and copper products	37	3,101	8,735,203	50,540,312	17,647,896	68,991,364
18	Machinery, industrial	57	7,452	22,388,109	30,828,502	34,861,851	66,548,899
19	Furniture	436	9,047	18,721,869	29,134,816	31,148,508	60,953,877
20	Feeds, stock and poultry, prepared	200	1,375	2,849,426	47,203,218	7,267,679	54,910,661
21	Rubber goods	24	7,184	17,423,541	24,938,363	28,790,508	54,504,987
22	Aircraft and parts	9	8,950	27,124,974	23,464,403	29,391,201	53,427,598
23	Boxes and bags, paper	53	4,383	9,060,798	30,625,772	20,629,091	51,529,616
24	Sheet metal products	66	4,896	13,435,954	26,568,427	22,762,247	49,847,845
25	Acids, alkalies and salts	10	3,258	11,095,188	17,893,342	26,930,869	49,062,246
26	Primary iron and steel	13	4,199	12,823,031	17,811,850	27,761,050	48,758,840
27	Printing and publishing	83	6,483	18,063,225	14,654,366	32,054,671	47,064,750
28	Breweries	8	2,831	9,407,754	15,466,908	30,683,063	46,919,240
29	Distilled liquors	8	2,033	5,932,718	17,677,705	26,454,874	45,241,268
30	Sash, door and planing mills	763	5,733	10,372,192	26,849,768	17,141,643	44,666,659
31	Miscellaneous chemical products, *n.e.s*	66	5,065	12,754,856	19,376,107	21,352,941	41,874,011
32	Woollen cloth	35	3,248	7,405,374	28,614,881	12,263,560	41,405,301
33	Medicinal and pharmaceutical preparations	91	3,678	9,588,414	12,739,120	28,185,281	41,374,453
34	Knitted goods, other than hosiery	69	5,113	9,034,876	22,773,682	17,213,466	40,348,049
35	Castings, iron	59	4,506	12,444,040	19,528,629	19,503,309	39,838,027
36	Aluminum products	22	2,172	6,467,974	24,209,124	14,019,739	38,503,122
37	Printing and bookbinding	531	6,591	15,870,537	12,843,850	24,547,793	37,773,640
38	Miscellaneous paper goods	67	2,627	5,798,779	21,362,145	15,545,779	37,151,153
39	Bridge building and structural steel	10	2,843	9,340,705	17,094,617	18,595,065	36,048,319
40	Shipbuilding	10	5,131	13,266,056	12,803,604	20,641,132	33,918,030
	Totals, Leading Industries[2]	**7,773**	**294,501**	**731,953,766**	**2,082,626,580**	**1,526,083,751**	**3,718,148,968**
	Totals, All Industries	**11,861**	**417,182**	**1,005,601,680**	**2,696,638,646**	**2,083,933,751**	**4,916,157,419**
	Percentages of leading industries to all industries	65·5	70·6	72·8	77·2	73·2	75·6

For footnotes, *see* end of table.

4.—Statistics of the Leading Industries of the Province of Quebec, 1951 and 1952—concluded

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
		1952					
		No.	No.	$	$	$	$
1	Pulp and paper	55	23,928	92,618,338	224,571,652	244,706,973	508,123,821
2	Non-ferrous metal smelting and refining	8	9,768	33,526,861	184,862,372	104,227,141	317,811,473
3	Petroleum products	8	2,660	10,585,447	174,406,024	79,663,408	264,754,614
4	Slaughtering and meat packing	39	4,568	13,609,341	157,131,835	31,277,516	189,403,163
5	Railway rolling-stock	9	17,127	50,611,035	82,300,614	74,122,930	158,827,706
6	Clothing, men's factory	347	19,617	37,844,860	85,045,156	71,205,156	156,665,126
7	Clothing, women's factory	525	18,598	38,210,452	77,309,252	70,695,363	148,313,470
8	Cotton yarn and cloth	23	13,947	32,842,242	91,434,443	47,393,766	141,304,092
9	Tobacco, cigars and cigarettes	33	6,935	20,352,735	69,039,035	59,973,778	129,361,513
10	Butter and cheese	721	5,431	11,505,685	88,225,213	21,289,304	111,546,525
11	Miscellaneous electrical apparatus and supplies, *n.e.s*	36	12,020	37,796,910	40,806,562	63,769,758	105,524,869
12	Aircraft and parts	18	14,705	43,051,790	57,820,814	44,551,104	102,995,292
13	Synthetic textiles and silk	35	11,502	30,523,948	41,023,776	55,852,193	99,118,924
14	Sawmills	1,844	10,136	16,309,832	56,569,658	31,744,320	89,264,991
15	Miscellaneous food preparations, *n.e.s*	83	2,594	6,265,442	56,150,291	24,414,170	81,154,192
16	Machinery, industrial	65	7,442	25,334,588	28,345,455	49,868,672	79,091,702
17	Footwear, leather	173	12,948	24,305,325	39,058,248	37,583,255	76,978,404
18	Bread and other bakery products	946	9,668	20,038,773	35,862,928	35,464,620	73,704,512
19	Brass and copper products	37	3,154	9,805,190	51,607,478	19,578,585	72,010,316
20	Shipbuilding	12	8,458	24,106,231	24,387,848	40,511,035	65,816,898
21	Furniture	486	9,212	20,787,133	30,530,467	34,564,197	65,791,630
22	Primary iron and steel	14	4,503	15,358,658	21,977,037	35,193,598	60,535,519
23	Feeds, stock and poultry, prepared	208	1,524	3,195,809	50,085,310	7,659,152	58,287,177
24	Sheet metal products	70	4,999	15,271,186	28,627,079	25,976,517	55,163,035
25	Rubber goods, including footwear	26	6,139	16,284,215	22,280,838	29,677,642	52,695,709
26	Printing and publishing	85	6,772	20,084,335	15,426,412	36,791,809	52,587,121
27	Boxes and bags, paper	53	4,441	10,046,654	30,877,675	20,016,977	51,250,624
28	Breweries	6	2,448	9,298,789	16,164,626	33,709,591	50,658,974
29	Bridge building and structural steel	11	3,464	12,431,761	22,982,681	23,971,517	47,373,780
30	Miscellaneous chemical products, *n.e.s*	68	6,350	17,142,845	20,699,642	23,135,193	45,284,471
31	Sash, door and planing mills	763	5,654	10,900,810	26,874,015	17,384,642	44,985,205
32	Distilled liquors	8	2,140	6,504,777	16,231,634	27,664,051	44,887,778
33	Acids, alkalies and salts	10	3,314	11,791,790	16,123,753	24,008,063	43,805,550
34	Medicinal and pharmaceutical preparations	91	3,624	10,383,613	12,634,109	28,643,191	41,754,193
35	Printing and bookbinding	549	6,684	17,546,412	14,001,751	26,987,025	41,393,254
36	Miscellaneous iron and steel products, *n.e.s*	85	3,853	12,488,687	21,305,208	17,003,861	38,902,382
37	Knitted goods, other than hosiery	65	4,859	8,839,854	21,984,332	16,417,206	38,761,477
38	Carbonated beverages	174	2,709	6,537,688	12,874,106	25,162,231	38,655,451
39	Miscellaneous paper goods	66	2,762	6,414,162	21,535,582	15,973,847	37,759,666
40	Aluminum products	21	2,287	7,519,231	24,165,370	12,607,037	37,097,498
	Totals, Leading Industries[2]	**7,876**	**302,944**	**818,073,434**	**2,113,340,281**	**1,690,440,394**	**3,919,402,097**
	Totals, All Industries	**12,024**	**429,698**	**1,125,944,703**	**2,745,618,113**	**2,288,643,279**	**5,176,234,825**
	Percentages of leading industries to all industries	65·5	70·5	72·7	77·0	73·9	75·7

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[1] In 1952, gross value of shipments was replaced by value of factory shipments; *see* text, p. 633.

[2] Excludes sugar refining, a leading industry but figures for which are confidential and cannot be published.

Subsection 3.—The Manufactures of Ontario

The Province of Ontario is recognized as one of the world's major industrial areas. In the past ten years, its industrial production more than doubled in value and has advanced in diversity as well as in volume. Three factors have been decisive in the development of Ontario to its present industrial position: the proximity of raw materials; cheap hydro-electric power; and a strategic location in relation to export markets not only on the North American Continent but overseas. Despite the great industrial progress made by other provinces, Ontario in 1952 produced over 49 p.c. of the nation's manufactured goods. Many new industrial areas are being created as new industries and branches of established industries are increasingly being located in the smaller centres.

A great increase in steel ingot capacity is being made possible by developments at Steep Rock Iron Mines. At Sarnia, huge investments have gone into the construction of plant for a whole group of new products based on Alberta oil flowing through the Edmonton-Sarnia pipeline. Significant developments are also taking place in synthetic rubber and industrial and consumer chemicals. Ontario has continued to gain in such traditional lines as motor-vehicles, industrial and farm machinery, household equipment, business and office machinery and electrical apparatus and supplies. Numerous plants making aircraft components and building materials have been established in the Toronto area, and plants for the manufacture of chemical products have been built in the Sarnia area and along the lower St. Lawrence River between Cornwall and Kingston.

Ontario has the greatest diversification of manufacturing production of any province. Certain industries, such as the manufacture of motor-vehicles and parts, heavy electrical machinery, agricultural implements, machine tools, starch and glucose, bicycles and the processing of raw tobacco are carried on practically in this province alone. Ontario predominated in the production of many of the forty leading industries in Canada, as shown by the following percentages for 1952: motor-vehicles, 97·9 p.c., motor-vehicle parts, 96·2 p.c.; heavy electrical machinery, 94·5 p.c.; agricultural implements, 93·7 p.c.; rubber goods, 81·5 p.c.; primary iron and steel, 76·8 p.c.; iron castings, 71·3 p.c.; fruit and vegetable preparations, 65·9 p.c.; miscellaneous paper products, 62·3 p.c.; sheet metal products, 59·7 p.c., printing and bookbinding, 58·8 p.c.; brass and copper products, 55·9 p.c.; paper boxes and bags, 54·3 p.c.; industrial machinery, 54·0 p.c.; aircraft and parts, 52·3 p.c.; furniture, 50·1 p.c. and miscellaneous electrical apparatus, 49·8 p.c. Ontario also dominated many of the smaller industries.

5.—Statistics of the Leading Industries of the Province of Ontario, 1951 and 1952

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
		1951					
		No.	No.	$	$	$	$
	Motor-vehicles	12	29,413	98,585,038	459,738,923	266,350,895	728,613,205
2	Pulp and paper	44	18,348	69,105,025	152,196,242	213,865,701	387,041,628
3	Primary iron and steel	24	22,670	77,427,879	178,221,367	157,409,525	359,409,798
4	Slaughtering and meat packing	61	8,073	24,185,518	304,088,225	49,834,086	355,623,746
5	Non-ferrous metal smelting and refining	7	9,539	31,492,681	176,377,172	161,481,600	353,410,730
6	Rubber goods, including footwear	37	15,825	46,832,708	121,981,566	132,244,763	256,983,995
7	Motor-vehicle parts	94	20,205	62,843,598	139,051,729	112,999,468	255,216,657
8	Machinery, heavy electrical	34	23,956	71,997,614	92,011,401	117,976,614	211,736,424
9	Agricultural implements	35	16,022	49,236,463	91,687,665	67,311,193	160,823,631
10	Petroleum products	14	4,907	17,458,996	104,000,618	41,344,080	153,525,619
11	Fruit and vegetable preparations	214	10,269	20,083,968	75,844,483	58,898,828	136,547,271
12	Butter and cheese	594	7,831	18,685,229	98,878,612	31,446,115	132,907,333
13	Flour mills	61	2,196	6,411,121	114,093,464	15,822,050	130,611,044
14	Sheet metal products	145	10,258	29,654,673	64,832,990	51,724,192	117,957,515
15	Castings, iron	95	11,124	34,860,924	51,607,751	60,404,546	114,424,622
16	Miscellaneous electrical apparatus and supplies, *n.e.s*	91	9,023	25,499,009	53,369,737	55,218,032	109,620,569
17	Machinery, industrial	171	11,438	35,073,653	38,413,386	68,771,058	108,256,267

For footnote, *see* end of table, p. 704.

5.—Statistics of the Leading Industries of the Province of Ontario, 1951 and 1952—continued

	Industry	Estab-lishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
		1951—concluded					
		No.	No.	$	$	$	$
18	Bread and other bakery products	878	1[illegible],379	30,872,621	49,277,835	50,730,274	103,398,406
19	Brass and copper products	87	6,033	18,115,792	66,849,915	33,715,132	101,713,204
20	Miscellaneous food preparations, *n.e.s.*	127	4,373	10,422,904	70,987,940	28,487,454	101,126,022
21	Furniture	581	13,953	33,066,289	45,335,834	51,894,560	98,316,401
22	Printing and publishing	302	12,496	37,256,286	28,478,443	66,466,366	95,863,645
23	Boxes and bags, paper	103	7,280	18,974,291	55,638,989	38,098,548	94,380,486
24	Railway rolling-stock	15	6,510	21,478,522	55,376,534	34,308,967	90,795,956
25	Printing and bookbinding	701	12,288	31,260,451	34,719,167	53,704,255	89,098,975
26	Hardware, tools and cutlery	209	10,325	29,217,684	29,017,915	53,772,632	84,082,896
27	Miscellaneous paper goods	111	5,757	15,501,821	46,551,708	35,162,708	82,384,333
28	Miscellaneous chemical products, *n.e.s.*	113	4,183	12,930,316	37,170,007	37,926,718	80,812,426
29	Refrigerators, vacuum cleaners and appliances	63	6,307	18,064,454	38,239,251	39,859,939	78,796,036
30	Foods, stock and poultry, prepared	276	2,546	5,844,168	62,425,435	13,607,217	77,021,112
31	Cotton yarn and cloth	29	8,060	18,254,309	46,918,075	28,627,169	76,643,198
32	Sawmills	1,340	9,265	17,192,740	40,014,300	35,156,523	76,072,011
33	Clothing, men's factory	150	10,443	21,635,597	38,440,030	33,340,850	72,026,902
34	Coke and gas products	16	2,975	8,916,748	38,542,416	25,186,511	67,358,509
35	Acids, alkalies and salts	16	3,981	13,071,859	21,199,043	38,738,224	66,819,780
36	Machinery, household, office and store	40	5,579	16,293,794	29,261,650	36,508,091	66,188,509
37	Wire and wire goods	66	5,721	17,838,053	24,801,984	40,371,841	66,056,768
38	Soaps, washing compounds and cleaning preparations	60	3,092	9,984,733	38,516,046	26,561,843	65,981,955
39	Breweries	21	2,970	10,474,955	18,224,270	45,134,007	64,262,387
40	Tobacco processing and packing	9	1,335	2,593,208	54,147,773	4,585,731	58,898,194
	Totals, Leading Industries	**7,046**	**390,948**	**1,138,695,692**	**3,286,529,891**	**2,515,048,306**	**5,930,808,165**
	Totals, All Industries	**13,025**	**599,433**	**1,669,386,982**	**4,334,394,367**	**3,569,400,065**	**8,074,731,217**
	Percentage of leading industries to all industries	54·1	65·2	68·2	75·8	70·5	73·4
		Estab-lishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
		1952					
		No.	No.	$	$	$	$
1	Motor-vehicles	12	29,853	109,967,579	486,328,048	262,419,364	751,369,766
2	Primary iron and steel	24	23,479	87,661,218	189,473,864	174,754,213	386,834,377
3	Non-ferrous metal smelting and refining	7	10,018	36,543,608	181,561,411	150,509,476	348,739,851
4	Pulp and paper	44	18,883	72,579,783	148,362,270	174,577,875	342,612,966
5	Slaughtering and meat packing	61	8,724	27,772,718	272,940,007	65,814,908	340,734,402
6	Motor-vehicle parts	98	20,479	68,925,345	141,536,730	121,051,426	266,350,853
7	Rubber goods, including footwear	39	15,403	49,083,910	98,486,975	132,633,175	233,735,185
8	Machinery, heavy electrical	36	24,218	82,076,661	84,697,534	137,558,307	224,163,169
9	Agricultural implements	35	16,743	58,886,476	104,106,235	86,694,899	192,790,073
10	Petroleum products	13	5,228	20,629,093	117,895,839	44,127,366	171,412,733
11	Fruit and vegetable preparations	215	10,004	20,996,627	77,612,761	60,181,738	139,548,869
12	Butter and cheese	544	7,627	19,337,253	97,580,081	35,421,053	135,702,469
13	Aircraft and parts	15	16,174	58,982,879	51,802,943	74,836,442	127,871,430
14	Sheet metal products	160	9,943	30,291,756	68,707,846	57,363,662	127,533,143
15	Flour mills	58	2,221	6,707,867	108,077,352	15,972,039	124,735,608
16	Machinery, industrial	181	12,204	39,184,054	45,112,643	76,316,075	122,578,731
17	Castings, iron	94	10,256	34,203,880	58,773,751	60,777,460	121,889,961
18	Miscellaneous electrical apparatus and supplies, *n.e.s.*	91	9,033	27,615,606	50,949,243	56,769,395	108,824,998

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[1] For footnote, *see* end of table, p. 704.

5.—Statistics of the Leading Industries of the Province of Ontario, 1951 and 1952—concluded

	Industry	Estab-lish-ments	Em-ployees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
		1952—concluded					
		No.	No.	$	$	$	$
19	Bread and other bakery products	861	14,548	34,152,670	49,308,357	55,430,184	108,431,789
20	Printing and publishing	307	12,463	40,715,387	30,573,010	73,008,517	104,515,126
21	Brass and copper products	86	5,642	18,595,441	65,819,266	36,306,540	103,307,400
22	Furniture	638	13,536	34,297,066	47,181,598	54,098,057	102,391,425
23	Miscellaneous food preparations, *n.e.s*	125	4,450	11,305,077	68,522,928	31,862,875	102,108,130
24	Printing and bookbinding	718	11,917	33,611,560	34,417,897	59,208,388	94,299,543
25	Boxes and bags, paper	101	6,924	19,778,903	55,009,595	37,770,004	93,422,151
26	Hardware, tools and cutlery	245	10,286	32,010,629	29,391,317	59,202,400	89,959,027
27	Miscellaneous chemical products, *n.e.s*	126	4,448	14,779,877	38,045,261	44,262,255	86,642,675
28	Miscellaneous paper goods	112	6,199	17,636,831	44,983,610	40,307,017	86,139,218
29	Railway rolling-stock	15	7,220	23,805,016	50,030,057	34,881,092	86,050,467
30	Radios and radio parts	62	7,524	20,850,455	44,341,241	40,506,811	85,325,135
31	Clothing, men's factory	158	11,154	24,565,552	45,402,722	38,832,315	84,476,633
32	Sawmills	1,284	9,309	18,938,314	44,220,203	37,886,829	83,158,216
33	Feeds, stock and poultry, prepared	289	2,731	6,260,638	64,259,139	14,326,108	79,720,005
34	Soaps, washing compounds and cleaning preparations	63	3,091	11,192,664	31,801,468	43,213,990	75,987,357
35	Tobacco processing and packing	9	1,289	2,679,666	68,593,177	5,234,246	74,007,865
36	Refrigerators, vacuum cleaners and appliances	62	6,103	18,446,534	30,881,078	41,098,748	72,832,981
37	Cotton yarn and cloth	30	7,609	17,768,586	45,143,839	25,911,867	72,216,984
38	Breweries	21	3,036	12,191,647	19,808,659	51,001,654	71,737,435
39	Coke and gas products	16	2,904	9,950,594	42,214,352	25,850,159	71,551,140
40	Boilers, tanks and platework	42	6,087	21,348,758	27,888,979	39,716,711	68,275,113
	Totals, Leading Industries	**7,097**	**408,960**	**1,296,328,178**	**3,361,843,286**	**2,677,695,640**	**6,163,984,399**
	Totals, All Industries	**13,172**	**609,696**	**1,844,186,405**	**4,387,431,403**	**3,811,106,576**	**8,372,173,626**
	Percentages of leading industries to all industries	53·9	67·1	70·3	76·6	70·3	73·6

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633.

Subsection 4.—The Manufactures of the Prairie Provinces

The leading industries of the Prairie Provinces are those based on agricultural resources—the grain-growing, cattle-raising and dairying areas. Next in importance, generally, are industries providing the necessities of the resident population, such as bread baking, printing and publishing, etc. The extensive railway services require large shops for the maintenance of rolling-stock, especially in the Winnipeg area, and the widespread use of motor-vehicles and power machinery on farms has given rise to the establishment of petroleum refineries in each province.

Considering the Prairie Provinces as an economic unit, slaughtering and meat packing had the largest value of shipments in 1952, amounting to $258,536,646, followed by petroleum products with $156,595,759, flour mills with $112,508,829, butter and cheese, $87,136,621 and railway rolling-stock $53,515,894. These five industries accounted for about 50 p.c. of the total production of the Prairie Provinces. Other leading industries, in order of value of factory shipments, were: bread and bakery products, breweries, sawmills, miscellaneous food preparations, printing and publishing, sash, door and planing mills, men's factory clothing, furniture, prepared stock and poultry feeds, sugar refining, sheet metal products, etc.

The nature of developments vary from one province to another. Alberta has moved to the forefront, especially since 1950. There the emphasis has been more on the manufacture of machinery and equipment, including such products as drill bits and tanks, heat exchangers and other bulky equipment for the burgeoning oil and gas industries. Chemicals, especially petrochemicals, have made striking gains; second in terms of new growth, they now embrace various rayon intermediates and polythene plastics as well as fertilizers and the manufacture of other new inorganic products such as caustic soda and chlorine. Sizable gains have been made by the food processing and building materials industries.

Developments in Saskatchewan have continued along more or less traditional lines, the largest gains having been recorded in food processing. The manufacture of building materials, including non-metallic mineral products and lumber, has also increased. The largest gain in employment was recorded by the oil-refining industry.

In Manitoba a surprisingly large number of small and medium-sized firms have located in the Winnipeg area since 1945. The clothing industry has outstripped electrical apparatus in employment gains; food processing, building materials and machinery manufacture following in that order. In plant development, the largest single increase has been in the meat-packing industry, although three large electrical apparatus plants and a sizable new oil refinery have also been established.

6.—Statistics of the Leading Industries of the Prairie Provinces, 1951 and 1952

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
				1951			
		No.	No.	$	$	$	$
	Manitoba						
1	Slaughtering and meat packing...	14	2,758	8,488,894	100,744,384	17,304,984	118,518,654
2	Railway rolling-stock............	4	6,065	16,696,467	18,188,726	17,187,504	35,949,321
3	Flour mills........................	9	523	1,161,150	24,354,337	3,192,480	27,702,651
4	Butter and cheese................	74	1,535	3,578,273	19,688,664	7,033,429	27,106,232
5	Petroleum products..............	4	358	1,113,217	17,192,300	3,088,003	21,061,570
6	Miscellaneous food preparations..	24	633	1,584,153	16,078,473	4,559,134	21,000,336
7	Clothing, men's factory..........	39	2,438	4,361,183	10,205,831	7,808,886	18,077,230
8	Bread and other bakery products.	122	1,530	3,481,894	6,456,125	6,131,562	12,999,173
9	Pulp and paper[2]..................	2	487	1,754,303	3,522,079	8,137,890	12,589,185
10	Clothing, women's factory.......	32	1,764	3,359,108	6,444,104	4,931,332	11,414,005
11	Furniture.........................	95	1,383	3,180,840	6,299,701	4,990,036	11,394,575
12	Printing and publishing..........	78	1,626	3,923,332	3,308,422	7,662,733	11,091,840
13	Breweries........................	6	566	1,778,879	1,996,514	7,092,776	9,243,149
14	Printing and bookbinding........	76	1,478	3,466,793	2,969,974	5,911,541	8,955,065
15	Primary iron and steel...........	4	1,000	2,792,450	2,672,887	5,563,398	8,732,057
16	Boxes and bags, paper...........	8	579	1,522,357	5,096,229	3,475,734	8,618,299
17	Bags, cotton and jute............	4	206	444,065	7,467,042	694,305	8,180,784
18	Sheet metal products............	18	875	2,151,161	3,722,243	3,984,656	7,786,847
19	Feeds, stock and poultry, prepared	37	251	533,108	5,820,961	1,207,545	7,107,015
20	Fur goods........................	60	727	1,650,117	3,955,205	2,255,280	6,235,843
21	Carbonated beverages...........	21	382	827,273	2,015,492	3,389,817	5,532,415
22	All other leading industries[3]......	6	1,119	3,392,036	24,898,981	9,180,837	34,843,284
	Totals, Leading Industries...	**737**	**28,283**	**71,241,053**	**293,098,674**	**134,783,862**	**434,139,530**
	Totals, All Industries.........	**1,512**	**41,459**	**100,170,966**	**349,203,612**	**192,848,667**	**551,346,046**

For footnotes, *see* end of table, p. 708.

6.—Statistics of the Leading Industries of the Prairie Provinces, 1951 and 1952—continued

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
		1951—concluded					
		No.	No.	$	$	$	$
	Saskatchewan						
1	Petroleum products	8	764	2,470,190	36,189,669	9,317,334	46,902,653
2	Flour mills	14	710	2,026,035	37,125,606	6,894,920	44,395,914
3	Slaughtering and meat packing	9	1,212	3,575,079	32,442,862	6,330,443	39,049,912
4	Butter and cheese	62	1,218	2,855,077	21,130,440	5,825,341	27,327,603
5	Breweries	5	365	1,012,640	1,965,193	5,999,664	8,093,341
6	Bread and other bakery products	83	956	1,876,101	4,105,260	3,679,806	7,992,470
7	Printing and publishing	107	1,127	2,646,042	1,505,733	4,311,805	5,910,472
8	Sawmills	372	866	992,285	1,648,591	2,760,032	4,497,183
9	Sash, door and planing mills	25	451	821,464	1,606,040	1,255,242	2,909,336
10	Feeds, stock and poultry, prepared	12	82	196,459	2,109,032	505,178	2,640,754
11	Carbonated beverages	22	275	581,401	1,083,122	1,419,278	2,635,374
12	Sheet metal products	5	153	363,047	1,217,904	849,094	2,079,634
	Totals, Leading Industries[4]	**724**	**8,179**	**19,415,820**	**142,129,452**	**49,148,137**	**194,434,646**
	Totals, All Industries	**973**	**11,023**	**26,290,294**	**185,151,455**	**61,088,606**	**250,813,026**
	Alberta						
1	Slaughtering and meat packing	12	2,860	8,532,987	90,266,175	13,940,411	104,631,052
2	Petroleum products	10	1,028	3,513,101	48,887,865	12,086,452	62,722,116
3	Flour mills	17	799	1,964,848	36,179,633	5,197,944	41,615,294
4	Butter and cheese	102	1,656	3,766,022	24,816,273	6,881,455	32,080,108
5	Sawmills	912	3,872	5,191,056	11,731,946	10,450,358	22,667,881
6	Sash, door and planing mills	108	1,700	3,773,496	11,940,279	6,270,662	18,406,297
7	Bread and other bakery products	131	1,466	3,262,696	6,548,818	6,658,573	13,425,925
8	Railway rolling-stock	3	2,130	5,915,225	6,650,681	5,916,225	12,795,785
9	Breweries	5	556	1,590,370	3,241,530	8,124,826	11,484,631
10	Miscellaneous food preparations, *n.e.s*	13	286	650,252	7,843,739	1,976,050	9,945,310
11	Printing and publishing	83	1,103	2,694,763	2,233,731	6,034,006	8,330,542
12	Feeds, stock and poultry, prepared	50	300	669,415	6,196,461	1,243,791	7,539,657
13	Clothing, men's factory	9	751	1,353,407	3,852,519	2,106,365	5,972,637
14	Miscellaneous wood products, *n.e.s*	13	277	702,845	3,333,141	1,158,941	4,542,659
15	Machine shops	55	617	1,821,388	1,261,675	2,991,414	4,334,417
16	Furniture	66	531	1,197,767	2,041,091	2,065,168	4,143,340
17	Glass and glass products	3	396	1,070,131	1,727,864	2,360,687	4,124,349
18	Printing and bookbinding	72	731	1,829,717	1,246,828	2,728,629	4,007,694
19	Bridge building and structural steel	3	480	1,310,710	1,718,409	2,166,541	3,916,096
20	Cement products	27	335	978,629	1,969,845	1,836,708	3,885,065
21	Carbonated beverages	20	302	609,344	1,542,196	2,046,276	3,685,211
22	Machinery, industrial	9	576	1,407,684	1,303,255	2,227,952	3,566,450
23	Fruit and vegetable preparations	9	248	440,309	1,477,062	1,596,164	3,134,821
24	Bags, cotton and jute	3	61	113,341	2,326,369	350,076	2,680,731
25	Sheet metal products	7	231	492,701	1,368,657	1,274,099	2,650,582
26	Biscuits	4	219	394,272	1,212,996	1,229,904	2,452,531
27	Agricultural implements	11	263	733,137	872,835	1,101,732	2,008,205
28	Motor-vehicle parts	15	208	550,094	1,201,218	741,995	1,957,076
29	Gases, compressed	6	156	501,724	379,152	1,441,307	1,886,529
30	Clay products from domestic clay	11	406	924,373	19,814	1,706,567	1,787,731
31	Signs, electric, neon and other	12	159	484,055	546,295	1,069,314	1,644,006
32	Miscellaneous iron and steel products, *n.e.s*	9	114	320,995	893,558	658,594	1,560,486
33	Boxes and baskets, wood	7	215	444,040	717,891	587,707	1,323,848
34	Brass and copper products	3	48	135,139	923,941	368,039	1,299,554
35	Castings, iron	6	207	517,790	537,962	732,336	1,290,785
36	All other leading industries[5]	12	1,801	4,927,639	13,331,200	14,051,612	29,092,059
	Totals, Leading Industries	**1,838**	**27,088**	**64,785,462**	**302,342,904**	**133,378,880**	**442,591,460**
	Totals, All Industries	**2,118**	**29,105**	**69,135,587**	**309,430,618**	**141,649,574**	**458,281,384**

For footnotes, *see* end of table, p. 708.

6.—Statistics of the Leading Industries of the Prairie Provinces, 1951 and 1952—continued

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
		1952					
		No.	No.	$	$	$	$
	Manitoba						
1	Slaughtering and meat packing...	14	2,972	9,456,024	89,998,817	21,849,275	112,313,765
2	Railway rolling-stock............	4	6,225	18,229,133	19,779,467	18,916,523	39,204,793
3	Flour mills......................	8	542	1,320,375	25,619,640	2,277,835	28,060,490
4	Butter and cheese................	72	1,509	3,703,236	19,806,297	7,109,403	27,308,886
5	Petroleum products..............	4	367	1,390,899	19,411,027	4,886,114	25,282,153
6	Clothing, men's factory..........	44	2,883	5,067,281	13,078,052	8,980,475	22,125,836
7	Miscellaneous food preparations...	26	743	1,753,871	16,442,781	4,375,977	21,130,206
8	Furniture........................	107	1,584	3,942,468	7,856,909	6,378,700	14,350,141
9	Printing and publishing..........	81	1,984	5,047,678	4,336,716	9,567,974	14,047,027
10	Bread and other bakery products.	133	1,669	3,764,008	6,316,106	6,776,611	13,511,460
11	Clothing, women's factory.......	27	1,613	3,508,930	7,158,410	5,618,920	12,810,598
12	Pulp and paper..................	3	491	1,823,926	3,974,316	7,858,180	12,792,741
13	Breweries........................	6	549	1,901,927	2,109,038	7,748,467	10,009,017
14	Primary iron and steel...........	4	1,058	3,385,366	3,208,475	6,073,436	9,834,937
15	Boxes and bags, paper............	8	564	1,627,728	5,144,429	3,553,677	8,748,550
16	Printing and bookbinding........	77	1,280	3,077,274	2,978,097	5,396,520	8,433,323
17	Sheet metal products............	20	897	2,452,735	3,795,342	3,961,610	7,836,021
18	Feeds, stock and poultry, prepared	33	231	513,647	5,698,253	1,204,628	6,987,215
19	Castings, iron...................	6	825	2,223,412	1,600,966	5,000,966	6,654,953
20	Bags, cotton and jute............	4	204	471,939	5,934,582	546,384	6,500,065
21	Agricultural implements..........	18	544	1,505,741	3,059,989	3,179,009	6,304,201
22	Fur goods........................	56	702	1,709,409	4,040,816	2,178,368	6,237,610
23	Carbonated beverages...........	21	354	882,716	2,069,245	3,663,425	5,846,825
24	All other leading industries[6]......	7	2,309	6,938,200	20,256,258	12,184,287	33,413,538
	Totals, Leading Industries...	**783**	**32,099**	**85,697,923**	**293,674,028**	**159,286,764**	**459,744,351**
	Totals, All Industries.........	**1,531**	**43,365**	**112,147,572**	**347,664,650**	**216,814,306**	**574,037,212**
	Saskatchewan						
1	Petroleum products..............	8	811	3,085,910	36,693,483	12,045,574	50,438,097
2	Flour mills......................	11	727	2,214,076	35,374,838	7,809,630	43,553,284
3	Slaughtering and meat packing...	9	1,256	4,023,364	27,516,726	8,570,362	36,371,664
4	Butter and cheese................	60	1,334	3,037,322	20,555,015	6,838,985	27,765,295
5	Breweries........................	5	381	1,165,907	2,242,086	7,311,908	9,693,814
6	Bread and other bakery products.	88	961	2,119,255	4,256,549	4,620,671	9,102,829
7	Printing and publishing..........	103	1,113	2,805,812	1,740,909	4,688,248	6,525,554
8	Sawmills.........................	404	906	1,109,632	1,738,305	3,030,303	4,857,183
9	Sash, door and planing mills......	26	402	977,240	1,758,073	1,746,448	3,553,414
10	Carbonated beverages............	24	278	681,058	1,382,515	1,876,568	3,428,266
11	Sheet metal products............	6	182	450,372	1,705,081	1,074,574	2,795,510
12	Feeds, stock and poultry, prepared	12	91	204,576	2,006,964	442,745	2,476,914
13	Miscellaneous wood products, *n.e.s*......................	7	161	355,214	1,455,033	932,963	2,412,243
	Totals, Leading Industries[7]...	**763**	**8,603**	**22,229,738**	**138,425,577**	**60,988,979**	**202,974,067**
	Totals, All Industries.........	**1,022**	**11,307**	**29,489,862**	**172,388,119**	**80,934,157**	**258,931,776**
	Alberta						
1	Slaughtering and meat packing...	11	3,332	10,106,365	90,397,405	18,998,227	109,851,217
2	Petroleum products..............	14	1,327	5,338,340	55,696,703	23,685,988	80,875,509
3	Flour mills......................	15	808	2,122,723	35,412,055	5,241,224	40,895,055
4	Butter and cheese................	102	1,734	4,199,179	24,736,180	6,927,284	32,062,440
5	Sawmills.........................	909	3,738	5,487,938	11,678,498	11,666,357	23,862,564
6	Sash, door and planing mills......	115	1,887	4,427,814	13,563,999	7,352,857	21,111,835
7	Bread and other bakery products.	128	1,593	3,717,829	6,959,012	7,750,247	14,975,903
8	Railway rolling-stock............	3	2,214	6,408,720	7,695,012	6,408,718	14,311,101
9	Breweries........................	5	555	1,790,465	3,547,570	9,585,609	13,261,612
10	Miscellaneous food preparations...	15	310	830,163	8,145,005	1,874,957	10,160,736
11	Printing and publishing..........	79	1,108	3,042,604	2,384,562	7,446,223	9,901,017
12	Feeds, stock and poultry, prepared	51	323	748,441	5,862,839	1,761,116	7,730,160
13	Concrete products................	29	597	1,841,486	3,779,728	3,576,050	7,487,676

For footnotes, *see* end of table, p. 708.

6.—Statistics of the Leading Industries of the Prairie Provinces, 1951 and 1952—concluded

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
		1952—concluded					
		No.	No.	$	$	$	$
	Alberta—concluded						
14	Clothing, men's factory	9	745	1,442,887	3,527,956	2,800,210	6,340,922
15	Machine shops	63	800	2,480,937	2,287,154	3,824,165	6,203,527
16	Miscellaneous wood products, *n.e.s*	12	359	940,504	4,093,137	1,876,514	6,031,869
17	Bridge building and structural steel	3	560	1,614,446	2,669,779	2,459,087	5,164,195
18	Furniture	68	549	1,365,169	2,460,539	2,344,966	4,849,491
19	Printing and bookbinding	74	792	2,162,503	1,420,419	3,268,087	4,724,218
20	Glass and glass products	3	418	1,123,515	1,883,411	2,764,628	4,683,085
21	Sheet metal products	10	315	927,627	2,205,846	2,159,315	4,381,079
22	Carbonated beverages	21	308	723,028	1,757,042	2,510,124	4,375,733
23	Fruit and vegetable preparations	8	276	510,066	1,783,798	2,241,039	4,076,573
24	Motor-vehicle parts	15	476	1,406,341	1,379,184	2,538,432	3,936,067
25	Biscuits	4	290	572,399	1,672,292	1,658,666	3,344,473
26	Roofing paper	4	140	379,103	1,603,145	1,636,747	3,273,422
27	Agricultural implements	12	320	929,400	991,463	1,681,631	2,733,862
28	Machinery, industrial	7	303	958,054	735,648	1,606,758	2,363,641
29	Miscellaneous chemical products, *n.e.s*	10	141	425,288	1,114,222	1,135,458	2,285,777
30	Miscellaneous iron and steel products	11	126	366,581	1,427,373	758,810	2,198,525
31	Bags, cotton and jute	3	61	133,559	1,934,566	172,406	2,111,507
32	Signs, electric, neon and other	18	196	659,280	627,775	1,361,229	2,024,426
33	Clay products from domestic clay	13	410	975,452	34,530	1,850,826	1,964,618
34	Castings, iron	7	262	746,001	657,503	1,207,907	1,887,216
35	Boxes and baskets, wood	6	216	522,321	821,505	745,867	1,590,134
36	Brass and copper products	3	46	155,042	773,933	458,618	1,239,850
37	Gases, compressed	4	100	291,942	208,355	951,551	1,199,144
38	All other leading industries[8]	13	2,060	6,297,316	18,108,867	14,804,254	34,703,822
	Totals, Leading Industries	**1,877**	**29,795**	**78,170,828**	**326,038,010**	**170,092,152**	**504,174,001**
	Totals, All Industries	**2,150**	**31,765**	**82,527,194**	**331,817,141**	**178,221,013**	**518,410,811**

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[1] Not comparable with previous years. In 1952, gross value of products was replaced by value of factory shipments; *see* text, p 633. [2] Publication of these figures authorized by firms concerned. [3] Includes: biscuits; bridge building and structural steel; non-ferrous metal smelting and refining; sugar refining. [4] Excludes non-ferrous metal smelting and refining, a leading industry but figures for which are confidential and cannot be published. [5] Includes: aircraft and parts; boxes and bags; concentrated milk; cement; distilled liquors; fertilizers; sugar refining; and vegetable oils. [6] Includes: aircraft and parts; biscuits; bridge building and structural steel; and non-ferrous metal smelting and refining. [7] Excludes non-ferrous metal smelting and refining, a leading industry but figures for which are confidential and cannot be published. [8] Includes: sugar refining; fertilizers; cement; aircraft and parts; boxes and bags, paper; concentrated milk products; distilled liquors; vegetable oils; and macaroni and kindred products.

Subsection 5.—The Manufactures of British Columbia

British Columbia, with factory shipments totalling $1,332,481,862 in 1951, ranked third among the provinces in manufacturing production. Forest resources, fisheries, minerals and electric power have given a broad base and wide diversification to the industrial development of the Province. The sawmilling industry was the leading industry with a gross value of shipments of $316,723,587, and pulp and paper was second with $125,290,032. Third in importance was fish processing, based principally on the estuarial salmon fisheries. British Columbia accounted for approximately 43 p.c. of the output of the Canadian fish-processing industry in 1952 and plays an important part in making Canada the largest fish exporting nation in the world. The other leading industries of the Province are shown in Table 7.

A feature of recent progress in the Province is that new developments are taking place in areas far removed from established industrial centres. Growing lines of communication and transportation are fanning out from and leading into formerly locked interior areas to tap a vast new potential and offer new sources of provincial economic unity and strength. The growth of the Province industrially is indicated by the increase in employment which, in 1952, was more than double the 1939 figure. Gross value of manufacturing in 1952 was more than double that of the immediate post-war year and increased more than five-fold since 1939. The most spectacular post-war development is the multi-million-dollar hydro-electric and aluminum smelter project at Kitimat, production from which started in August 1954. In addition, large capital investments have been made in sawmills and new plants for the manufacture of plywood and furniture. British Columbia dominates the wood products industry, accounting for 38 p.c. of the Canadian production of this group of industries. Four new pulp and paper mills have been built and others expanded to increase British Columbia's output of newsprint, kraft and dissolving pulps. New plants making chemicals, principally fertilizers and plywood adhesives, have been established as well as factories making machinery and equipment. Food-processing plants and oil refineries have also made considerable headway.

7.—Statistics of the Leading Industries of the Province of British Columbia, 1951 and 1952

	Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Gross Value of Products[1]
					1951		
		No.	No.	$	$	$	$
1	Sawmills	1,564	29,462	81,751,249	176,682,690	167,001,838	347,147,390
2	Pulp and paper	11	5,778	21,899,728	44,933,463	90,824,327	141,503,427
3	Fish processing	63	4,168	11,348,419	51,646,344	31,543,333	84,121,542
4	Slaughtering and meat packing	11	1,370	4,263,002	52,814,828	5,982,251	59,081,092
5	Veneers and plywoods	12	3,416	9,832,376	18,130,385	24,806,298	43,202,315
6	Petroleum products	6	579	2,100,645	28,503,586	12,321,512	41,903,272
7	Sash, door and planing mills	166	2,770	7,217,625	27,136,332	13,811,839	41,331,453
8	Miscellaneous food preparations, *n.e.s*	47	782	1,584,218	30,168,144	6,323,452	36,613,721
9	Fertilizers	6	1,280	4,583,245	9,850,262	20,832,682	30,809,678
10	Fruit and vegetable preparations	71	2,355	4,146,456	15,975,947	8,659,717	24,897,710
11	Butter and cheese	29	1,773	4,636,619	13,960,783	7,011,938	21,566,132
12	Bread and other bakery products	262	2,621	6,154,025	10,360,405	10,201,433	21,168,241
13	Shipbuilding	27	3,484	11,127,087	5,952,140	14,793,689	21,042,863
14	Printing and publishing	86	2,752	7,658,511	4,665,053	14,076,956	18,906,674
15	Machinery, industrial	40	2,138	6,569,451	6,419,233	11,471,074	18,110,416
16	Sheet metal products	28	890	2,672,665	9,426,314	5,247,076	14,800,217
17	Feeds, stock and poultry, prepared	42	652	1,521,571	11,649,778	2,825,752	14,703,208
18	Furniture	189	1,953	4,625,016	6,723,015	7,415,149	14,310,215
19	Breweries	11	688	1,997,318	2,901,872	9,590,778	12,727,902
20	Miscellaneous wood products, *n.e.s*	43	645	1,848,950	7,253,483	4,523,713	11,938,080
21	Boxes and bags, paper	12	691	1,772,933	7,245,735	4,343,437	11,653,032
22	Miscellaneous paper goods	13	608	1,518,491	7,100,585	3,465,150	10,608,685
	Totals, Leading Industries.[2]	**2,739**	**70,855**	**200,829,600**	**549,500,377**	**477,073,394**	**1,042,147,265**
	Totals, All Industries	**3,897**	**93,647**	**262,626,283**	**789,840,417**	**592,448,565**	**1,404,880,341**

For footnotes, *see* end of table, p. 710.

7.—Statistics of the Leading Industries of the Province of British Columbia, 1951 and 1952—concluded

Industry	Establishments	Employees	Salaries and Wages	Cost of Materials	Net Value of Products	Value of Factory Shipments[1]
	1952					
	No.	No.	$	$	$	$
1 Sawmills	1,813	28,598	82,847,292	158,824,546	154,069,375	316,723,587
2 Pulp and paper	12	6,048	25,205,631	48,964,229	69,635,586	125,290,032
3 Fish processing	78	3,433	10,066,076	35,163,222	21,592,029	57,590,974
4 Slaughtering and meat packing	9	1,390	4,634.230	45,147,520	8,736,848	54,182,549
5 Sash, door and planing mills	182	2,858	8,308,522	30,169,686	15,590,699	46,289,457
6 Veneers and plywoods	11	3,825	11,142,892	19,724,945	22,108,341	42,176,834
7 Petroleum products	5	725	2,991,967	25,933,578	10,669,793	37,818,297
8 Miscellaneous food preparations	47	813	1,827,890	29,326,292	6,143,491	35,600,308
9 Fertilizers	5	1,233	4,870,938	10,944,677	21,401,300	32,475,077
10 Shipbuilding	26	3,838	13,711,307	10,299.889	20,015,332	30,643,942
11 Fruit and vegetable preparations	72	2,173	4,527,851	16,597,378	11,601,419	28,479,787
12 Bread and other bakery products	263	2,670	6,775,668	10,299,663	12,169,736	23,117,051
13 Butter and cheese	26	1,692	4,801,941	14,918,000	7,528,645	23,058,348
14 Printing and publishing	89	2,684	8,937,544	5,103,615	15,303,086	20,593,508
15 Bridge building and structural steel	4	1,316	5,154,935	11,339,035	7,504,648	19,009,632
16 Machinery, industrial	39	1,842	6,301,708	5,026,265	11,935,703	17,158,361
17 Feeds, stock and poultry, prepared	45	712	1,817,004	11,410,256	3,226,547	14,963,005
18 Furniture	194	1,880	4,761,800	7,131,589	7,512,223	14,782,027
19 Breweries	11	712	2,408,816	3,358,085	10,289,079	13,882,924
20 Miscellaneous wood products, *n.e.s*	45	739	2,353,009	8,527,263	5,072,931	13,787,818
21 Sheet metal products	29	858	2,855,912	8,461,335	4,884,258	13,477,639
22 Boxes and bags, paper	12	669	1,917,529	7,535,501	4,547,059	12,153,840
23 Miscellaneous paper goods	14	595	1,646,724	7,434,246	4,136,295	11,623,683
Totals, Leading Industries[3]	**3,031**	**71,303**	**219,867,186**	**531,640,815**	**455,674,423**	**1,004,878,680**
Totals, All Industries	**4,225**	**92,667**	**283,530,976**	**751,011,248**	**556,172,312**	**1,332,481,862**

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633.

[2] Excludes non-ferrous metal smelting and refining, sugar refining, bridge building and structural steel and distilled liquors, which are leading industries but for which figures are confidential and cannot be published.

[3] Excludes non-ferrous metal smelting and refining, sugar refining, and distilled liquors, which are leading industries but for which figures are confidential and cannot be published.

Section 2.—Manufacturing Industries in Urban Centres

The prosperity of most of the cities and towns of Canada, especially in the east, is intimately connected with their manufacturing industries, which provide employment for a large proportion of the labour forces. In the west the cities are more largely distributing centres, though manufactures are increasing rapidly there also.

Table 8 indicates the extent to which the manufacturing industries of Canada are concentrated in urban centres and shows, by provinces, the proportion of the gross manufacturing production contributed by cities and towns having a gross production of over $1,000,000 each. In the more highly industrialized Provinces of Ontario and Quebec such cities and towns accounted for 91 p.c. and 94 p.c. in 1951, and 90 p.c. and 94 p.c. in 1952, respectively, of the total manufactures for those Provinces, while in the Atlantic Provinces and British Columbia, where sawmilling, fish packing, and dairying are leading industries, the proportions were 72 p.c. and 57 p.c. in 1951, and 72 p.c. and 59 p.c. in 1952, respectively. In the Prairie Provinces manufacturing is confined largely to a few urban centres.

8.—Urban Centres, each with a Gross Manufacturing Production[1] of over $1,000,000, Number of Establishments and Production in these Centres as a Percentage of the Provincial Total, by Province, 1951 and 1952.

NOTE.—Statistics published in this table are in some cases higher than the figures published in Table **11**, pp. 713–717, since the table below includes statistics of towns with fewer than three establishments and production of over $1,000,000 each. It is not possible to publish this information in Table **11** without disclosing the operations of individual establishments.

Province or Territory	Urban Centres with a Gross Production[1] of over $1,000,000 each	Establishments Reporting in Urban Centres Producing over $1,000,000 each	Production in Urban Centres Producing over $1,000,000 each	Total Production in each Province	Production in Urban Centres as a Percentage of Total Production in each Province
			1951		
	No.	No.	$	$	p.c.
Newfoundland	4	120	63,276,836	100,642,613	62·9
Prince Edward Island	2	54	14,418,757	22,523,439	64·0
Nova Scotia	24	489	211,909,596	303,619,234	69·8
New Brunswick	19	355	239,869,058	307,173,504	78·1
Quebec	155	7,589	4,619,215,022	4,916,157,419	94·0
Ontario	175	9,382	7,325,522,565	8,074,731,217	90·7
Manitoba	11	1,056	498,825,915	551,346,046	90·5
Saskatchewan	9	432	194,606,750	250,813,026	77·6
Alberta	19	926	367,060,099	458,281,384	80·1
British Columbia	31	2,387	798,495,498	1,404,880,341	56·8
Yukon and Northwest Territories	—	—	—	2,018,909	—
Canada	**449**	**22,790**	**14,333,200,096**	**16,392,187,132**	**87·4**
			1952		
	No.	No.	$	$	p.c.
Newfoundland	3	120	67,256,653	105,459,684	63·8
Prince Edward Island	2	51	14,149,768	22,069,671	64·1
Nova Scotia	25	508	228,319,122	326,839,747	69·9
New Brunswick	18	346	232,264,208	293,759,782	79·1
Quebec	158	7,827	4,870,982,973	5,176,234,825	94·1
Ontario	176	9,528	7,517,968,724	8,372,173,626	89·8
Manitoba	12	1,077	495,459,729	574,037,212	86·3
Saskatchewan	8	381	194,167,970	258,931,776	75·0
Alberta	17	935	395,473,136	518,410,811	76·3
British Columbia	35	2,473	779,492,262	1,332,481,862	58·5
Yukon and Northwest Territories	—	—	—	2,288,039	—
Canada	**454**	**23,246**	**14,795,534,545**	**16,982,687,035**	**87·1**

[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633.

9.—Principal Statistics of the Manufacturing Industries of the Six Leading Manufacturing Cities, 1939, 1944, 1946 and 1949-52

City and Year	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]
	No.	No.	$	$	$	$
Montreal, Que. 1939	2,501	105,315	114,602,118	7,667,848	254,188,246	483,246,583
1944	3,109	185,708	308,396,358	15,855,932	650,618,563	1,215,988,014
1946	3,785	173,507	291,381,617	14,740,538	602,667,823	1,147,945,303
1949	4,136	184,779	399,943,526	16,487,474	847,444,669	1,596,713,694
1950	4,127	184,982	419,217,987	17,034,094	914,907,200	1,696,677,033
1951	4,137	183,436	449,279,943	17,840,862	1,026,220,450	1,849,153,995
1952	4,283	187,396	496,270,442	18,291,520	1,041,585,029	1,960,826,915

For footnote, *see* end of table, p. 712.

9.—Principal Statistics of the Manufacturing Industries of the Six Leading Manufacturing Cities, 1939, 1944, 1946 and 1949-52—concluded

City and Year		Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]
		No.	No.	$	$	$	$
Toronto, Ont.	1939	2,885	98,702	122,553,435	7,306,351	240,532,281	482,532,331
	1944	3,344	154,538	260,776,613	11,743,947	513,429,109	1,020,345,353
	1946	3,632	145,556	247,298,288	12,238,707	549,256,912	1,036,939,790
	1949	4,005	158,562	368,510,524	17,003,151	837,148,440	1,579,186,450
	1950	4,011	160,063	392,754,292	18,176,609	918,699,592	1,686,922,991
	1951	3,796	151,333	415,206,705	17,599,992	991,268,163	1,763,192,114
	1952	3,825	149,020	439,286,411	17,159,813	943,718,148	1,787,644,247
Hamilton, Ont.	1939	461	31,512	39,563,423	5,267,577	70,829,034	152,746,340
	1944	480	53,500	94,982,915	12,095,294	171,117,467	363,033,672
	1946	501	45,951	80,959,432	10,434,888	150,977,835	308,033,098
	1949	546	54,665	137,641,333	17,728,214	285,180,403	563,982,920
	1950	549	54,823	145,093,180	18,862,120	310,380,224	625,480,893
	1951	560	58,841	174,296,725	20,370,777	391,412,980	755,546,928
	1952	575	59,257	190,167,980	21,287,922	385,701,709	781,596,810
Windsor, Ont.	1939	222	17,729	25,938,890	1,673,417	63,907,106	122,474,320
	1944	231	35,912	80,667,573	4,890,272	232,102,240	387,603,874
	1946	256	30,889	60,315,436	3,748,979	138,788,813	244,925,148
	1949	283	34,591	94,304,627	5,373,123	271,392,923	494,162,203
	1950	280	34,901	105,778,494	4,967,956	311,563,422	564,870,512
	1951	297	34,865	112,076,215	5,436,889	351,697,300	626,292,546
	1952	330	36,628	130,027,457	6,027,143	377,637,512	646,949,316
Winnipeg, Man.	1939	648	17,571	20,717,273	1,491,823	44,873,043	81,024,272
	1944	686	25,870	38,824,299	2,445,806	119,917,745	198,169,626
	1946	756	26,730	42,354,650	2,625,075	121,531,306	206,381,007
	1949	860	28,687	58,604,162	3,166,077	143,827,270	255,006,806
	1950	855	27,804	58,991,267	3,086,710	142,486,939	261,781,262
	1951	849	27,704	65,741,785	3,759,880	167,583,852	292,496,767
	1952	843	28,162	70,744,396	3,157,945	160,844,930	296,263,701
Vancouver, B.C.	1939	829	17,957	22,382,192	1,397,159	56,565,511	101,267,243
	1944	933	43,473	79,141,407	3,568,106	142,416,371	289,390,718
	1946	1,071	31,408	55,960,984	3,075,458	138,045,068	270,165,166
	1949	1,225	33,536	78,793,345	4,392,716	204,642,985	358,620,526
	1950	1,219	34,411	85,542,771	4,894,707	234,053,078	409,347,342
	1951	1,255	34,376	96,222,111	5,180,626	270,748,863	461,594,390
	1952	1,275	33,296	102,163,999	5,292,224	248,964,894	437,663,057

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[1] Net value is derived from gross value by deducting cost of materials, fuel and electricity. In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633.

10.—Principal Statistics of the Manufacturing Industries in the Six Leading Metropolitan Areas, 1951 and 1952

Metropolitan Area	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]
	No.	No.	$	$	$	$
				1951		
Greater Montreal[2]	4,686	230,603	582,436,046	41,001,307	1,469,058,595	2,616,414,158
Greater Toronto	4,466	195,143	543,597,110	24,339,207	1,275,564,909	2,330,355,717
Greater Hamilton	650	62,084	181,760,616	20,922,630	405,198,540	782,021,632
Greater Vancouver	1,585	50,809	143,706,862	8,450,470	422,313,553	727,493,246
Greater Windsor	324	35,611	113,817,235	5,601,283	356,932,055	635,639,664
Greater Winnipeg	992	36,578	89,237,598	6,604,181	297,718,672	471,828,715
				1952		
Greater Montreal[2]	4,883	244,556	668,391,832	42,927,741	1,584,960,418	2,918,119,449
Greater Toronto	4,584	196,751	590,274,862	25,521,719	1,248,197,084	2,414,796,814
Greater Hamilton	671	62,657	199,160,901	21,944,130	399,562,543	811,245,985
Greater Vancouver	1,614	48,986	150,892,594	8,467,160	376,690,476	672,232,692
Greater Windsor	357	37,414	132,071,266	6,195,414	383,459,223	656,773,394
Greater Winnipeg	996	37,759	97,612,884	5,744,042	288,166,100	478,573,305

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633.

[2] Exclusive of the non-ferrous smelting and refining industry.

11.—Statistics of Manufactures of Urban Centres, each with Factory Shipments[1] of $5,000,000 or over and with Three or More Establishments, 1952, with Comparable Figures for 1951

NOTE.—Statistics for urban centres with three or more establishments cannot be published when one establishment has 75 p.c. or two establishments 90 p.c. of the total production.

Province and Municipality	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Newfoundland—												
Corner Brook (East and West)	11	2,107	8,074,803	1,470,793	14,324,729	36,861,897	16	2,600	9,614,319	1,645,450	15,407,946	40,010,721
St. John's	104	2,898	5,161,692	424,076	10,970,470	23,075,039	103	2,786	5,639,402	481,372	12,803,063	25,025,515
Prince Edward Island—												
Charlottetown	36	604	1,211,433	135,272	7,945,178	10,621,343	33	682	1,491,949	149,751	7,107,785	10,497,049
Nova Scotia—												
Amherst	26	1,051	1,984,216	240,549	6,032,981	10,682,984	26	1,059	2,213,422	232,198	5,665,881	10,368,748
Halifax	146	5,589	12,515,605	835,576	23,174,054	47,050,752	144	6,405	15,397,994	902,963	27,143,325	58,071,976
Lunenburg	15	642	1,303,245	83,493	3,195,537	5,269,539	16	682	1,502,925	101,800	3,693,155	5,936,085
New Glasgow	30	1,060	2,477,001	337,865	3,548,474	7,654,749	28	1,167	2,760,554	354,539	4,235,471	8,622,309
Sydney	39	6,090	16,606,996	5,385,358	30,688,363	63,683,126	41	6,489	19,486,312	5,793,229	32,974,778	63,956,389
Trenton	[2]	[2]	[2]	[2]	[2]	[2]	6	2,142	5,759,868	637,511	19,353,907	28,979,557
Truro	37	1,154	1,918,982	192,667	5,639,276	8,645,353	40	1,134	1,977,841	208,505	4,851,585	8,245,002
Yarmouth	26	967	1,841,087	182,353	6,412,506	10,573,982	26	907	1,806,893	159,398	5,633,501	9,655,088
New Brunswick—												
Fredericton	47	847	1,585,432	128,442	4,009,013	6,748,631	49	885	1,761,080	125,716	3,865,174	6,803,919
Lancaster	6	696	2,083,179	689,294	5,623,862	14,221,502	6	689	2,126,124	672,075	4,175,257	14,341,500
Moncton	48	3,427	8,462,730	561,748	24,895,476	37,595,067	50	3,374	8,728,999	542,669	22,271,465	35,746,342
Saint John	113	3,534	7,763,990	1,121,035	51,395,536	69,207,700	115	4,532	10,379,369	1,316,553	45,902,475	70,888,598
Quebec—												
Acton Vale	[2]	[2]	[2]	[2]	[2]	[2]	16	941	1,837,643	56,312	3,422,111	6,195,412
Beauharnois	15	2,108	6,453,518	3,253,514	13,509,991	29,042,436	16	1,997	6,574,785	3,916,223	13,744,773	35,281,824
Berthierville	17	695	1,265,410	160,762	3,073,610	6,099,431	16	644	1,328,968	152,453	2,816.722	6,069,985
Cap de la Madeleine	34	2,443	5,638,114	1,270,091	20,922,314	40,005,116	38	2,398	5,607,239	1,472,958	20,494,305	37,812,222
Coaticook	21	1,115	2,061,612	104,832	5,166,221	8,529,248	21	1,029	2,065,344	127,173	5,114,713	8,430,394
Delson	5	505	1,429,697	667,057	1,956,700	5,493,981	5	487	1,456,875	621,387	2,493,937	6,349,310
Drummondville	50	8,586	20,366,163	1,708,397	30,822.367	74,931,271	46	7,306	18,798,266	1,608,149	27,498,590	67,143,955
Farnham	23	1,136	2,312,010	175,324	6,496,983	11,609,791	20	1,086	2,474,201	182,541	5,049,333	9,964.989
Granby	76	5,236	11,349,114	653,340	28,393,393	51,725,279	86	5,095	12,360,721	757,903	30,791,134	58,976,686

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[1] *See* footnote 1, end of table, p. 717.

[2] *See* headnote to this table.

11.—Statistics of Manufactures of Urban Centres, each with Factory Shipments[1] of $5,000,000 or over and with Three or More Establishments, 1952, with Comparable Figures for 1951—continued

Province and Municipality	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Quebec—concluded												
Grand'Mère	24	2,362	5,814,799	1,487,431	13,137,872	29,661,355	29	2,501	6,468,355	1,543,694	14,307,768	31,975,032
Hull	62	3,983	9,978,019	1,951,139	31,436,649	53,055,315	61	4,158	11,060,022	1,920,081	29,066,748	51,435,470
Huntingdon	15	689	1,937,328	134,731	10,881,834	14,351,851	15	647	1,886,433	164,199	8,197,508	13,031,435
Joliette	58	2,128	4,431,163	522,361	9,072,074	19,245,480	55	2,163	4,782,159	541,457	8,111,780	18,426,931
Lachine	61	7,987	24,684,397	1,145,333	35,982,904	84,498,209	69	8,869	29,772,346	1,193,816	39,699,379	103,944,138
Lasalle	40	4,250	11,213,440	3,036,469	49,126,053	93,028,413	39	4,274	12,847,279	2,928,499	49,182,217	95,853,956
Longueuil	35	2,326	5,340,328	301,792	11,067,904	23,160,077	34	2,998	7,862,699	232,368	12,349,058	25,172,284
Marieville	21	549	981,965	51,955	3,111,265	5,122,939	20	557	1,001,848	67,108	3,180,088	5,076,768
Montmagny	44	1,507	2,807,830	174,249	6,255,563	11,009,096	44	1,373	2,831,135	178,140	5,159,133	10,704,265
Montreal	4,137	183,436	449,279,943	17,840,862	1,026,220,450	1,849,153,995	4,283	187,396	496,270,442	18,291,520	1,041,585,029	1,960,826,915
Montreal East	31	5,410	17,041,529	14,754,164	315,319,678	414,261,809	33	5,864	20,204,908	15,036,436	284,745,924	408,256,995
Mount Royal	20	2,204	6,621,367	219,636	14,459,423	26,938,732	22	2,896	9,346,881	284,231	17,176,141	34,652,934
Notre Dame de Portneuf	12	443	959,331	307,688	3,740,020	6,006,127	13	464	1,165,288	356,778	3,524,917	5,414,276
Outremont	48	2,135	5,019,855	127,877	9,309,399	19,053,867	53	2,339	5,682,572	139,428	9,579,032	20,516,740
Plessisville	19	1,002	2,131,721	83,745	3,277,823	6,387,857	24	940	2,236,190	80,835	3,432,060	7,371,082
Princeville	15	439	799,934	78.845	3,113,577	6,022,394	16	466	866,192	90,543	5,713,320	11,280,304
Quebec	428	15,535	32,530,866	4,296,864	82,334,229	153,311,944	431	15,856	36,583,967	4,585,821	84,849,662	161,966,412
Rock Island	15	670	1,628,885	64,652	1,479,520	5,454,607	16	706	1,823,825	69,459	1,524,273	5,662,394
St. Hyacinthe	80	5,096	10,248,437	582,023	28,880,750	47,223,035	74	4,568	9,626,533	582,557	26,726,901	45,405,465
St. Jean (St. Johns)	67	5,680	13,015,537	1,037,583	19,884,088	43,688,478	68	5,435	15,095,361	1,006,216	20,624,062	48,168,624
St. Jérôme (Terrebonne Co.)	58	3,755	7,923,106	548,939	16,319.517	30,334,694	54	3,414	7,398,619	513,834	13,302,588	27,463,772
St. Lambert	20	808	1,734,140	107,193	4,216,547	7,724,355	18	819	1,985,210	111,573	4,804,169	8,438,836
St. Laurent	48	11,315	33,547,522	1,243,383	37,951,440	85,530,142	56	17,110	49.931,594	1,392,644	74,934,851	139,795,692
Ste. Marie	20	738	1,244,994	103,619	3,185,104	6,106,190	20	845	1,552,549	131,116	3,893,523	7,144,852
Ste. Thérèse de Blainville	32	759	1,388,675	64,900	2,119,267	4,419,346	34	935	1,694,302	82,174	3,012,443	6,303,530
Shawinigan Falls	47	5,712	17,338,314	9,115,659	47,009,334	110,246,673	50	6,070	19,393,036	9,399,339	49,292,730	112,759,118
Sherbrooke	102	8,813	19,552,824	1,312,678	48,419,154	86,594,071	104	8,080	20,809,134	1,327,528	44,473,261	89,584,107
Sorel	35	1,970	4,473,185	690,187	2,813,206	7,896,000	34	2,185	5,045,440	1,041,965	4,457,848	11,390,962
Three Rivers	90	7,705	21,697,369	6,719,564	50,030,400	106,059,161	94	7,434	21,819,563	7,054,096	49,295,764	107,614,075
Valleyfield	39	4,656	9,714,919	779,524	20,392,032	43.653,626	41	3,496	8,095,104	711,985	13,861,043	30,371,004
Verdun	68	1,398	2,803,125	83,599	6,282,562	11,527,395	75	1,730	3,534,269	96,832	7,078,037	13,686,803
Victoriaville	54	2,582	4,953,989	176,601	9,639,566	18,383,113	55	2,830	5,593,266	206,324	10,995,655	20,076,247
Waterloo	18	825	1,772,801	85,394	2,478,337	5,375,753	19	707	1,512,810	85,414	2,351,903	5,192,577
Westmount	27	2,044	5,572,374	287,605	6,535,471	16,720,644	33	2,119	6,300,271	369,860	6,823,805	18,788,938

Ontario—												
Acton	21	1,012	2,269,003	233,815	6,531,703	9,422,669	19	902	2,082,617	251,730	5,349,692	9,717,743
Amherstburg	13	1,026	2,930,221	1,807,006	4,716,056	16,787,162	13	1,012	3,300,784	1,826,726	4,813,824	17,519,600
Arnprior	21	709	1,682,908	112,769	3,742,620	7,348,349	20	697	1,797,611	115,228	3,081,155	6,673,790
Aurora	15	617	1,354,095	76,321	4,792,208	7,139,153	15	603	1,403,682	75,296	3,881,536	7,217,168
Barrie	26	894	2,027,374	173,139	9,533,849	14,958,826	28	863	2,167,262	164,631	7,882,210	13,582,686
Belleville	63	3,104	8,263,479	1,599,386	13,523,032	34,375,056	61	3,166	9,130,756	1,657,210	14,817,462	39,023,416
Bowmanville	[2]	[2]	[2]	[2]	[2]	[2]	18	977	2,836,759	197,904	5,290,175	12,757,114
Brampton	31	1,114	2,625,832	161,950	5,276,267	10,660,999	31	1,100	2,971,059	178,724	4.940,275	10,533,746
Brantford	157	13,629	37,794,382	1,816,485	71,064,370	141,506,003	162	13,617	43,233,137	1,904,584	78,534,374	153,862,614
Brockville	42	1,922	4,658,331	329,333	11,687,974	20,179,491	41	1,288	3,113,371	271,224	7,057,855	13,077,522
Burlington	16	754	1,907,098	116.094	6,034,631	9,831,786	24	870	2,389,527	120,917	6,374,762	10,986,447
Caledonia	11	314	836,111	293,034	2,679,035	5,152,571	12	342	1,006,842	251,825	3,330,866	5,130,677
Chatham	76	4,215	11,800,759	1,134,461	68,329,308	94,167,137	76	3,868	12,031,375	1,077,167	69,903,032	97,970,263
Cobourg	29	1,042	2,425,757	218,302	4,718,256	10,042,731	29	953	2,424,002	222,174	4,519,776	9,683,282
Collingwood	20	1,138	2,814,897	120,060	5,164,508	9,051,206	20	1,288	3,638,339	139,169	5,438,229	10,463,308
Cornwall	50	6,961	18,698,577	3,519,064	31,807,861	78,072,116	49	6,437	18,087,814	3,432,747	32,630,228	71,948,578
Dundas	34	1,762	4,142,191	243,066	4,002,164	10,011,583	35	1,801	4,934,575	248,625	3,528,037	11,112,853
Dunnville	20	1,089	2,173,163	106,007	6,023,009	8,846,634	21	1,060	2,377,156	122,906	6,242,734	9,276,874
Eastview	22	458	1,086,431	93,379	7,017,753	9,385.048	22	380	994,345	84,702	6,384,696	9,145,070
Elmira	21	794	2,076,344	185,386	4,759,350	9,145,547	21	765	2,146,780	205,656	4,730,185	8,572,833
Fort Erie	28	952	2,486,928	66,710	4,794,808	11,217,558	28	1,533	4,868,883	85,093	7,101,079	19,914,357
Fort William	71	3,486	10,738,162	2,409,247	24,319,679	57,158,259	69	4,171	13,429,027	2,433,851	27,250,322	58,251,364
Galt	92	6,467	16,531,157	777,798	27,369,130	55,671,274	99	6,637	18,600,450	789,884	30,997,134	63.848,579
Gananoque	20	889	2,181,894	186,252	4,275,931	8,316,993	18	816	2,172,523	215,649	4,007,080	7,905,660
Georgetown	18	1,128	3,376,602	195,805	6,923,388	12,004,148	16	933	2,522,729	170,608	5,033,699	8,691,236
Goderich	16	419	917,129	215,486	3,357,229	5,710,183	18	627	1,723,463	200,319	4,059,658	7,845,081
Guelph	110	6,160	15,709,981	966,520	31,224,403	59,815,567	111	5,910	15,964,795	1,011,891	28,914,899	58,265,359
Hamilton	560	58,841	174,296,725	20,370,777	391,412,980	755,546,928	575	59,257	190,167,980	21,287,922	385,701,709	781,596,810
Hanover	24	1,047	2,226,276	101,154	3,746,040	6,989,235	24	985	2,376,708	103,739	3,632,595	7,134,319
Hespeler	19	1,965	4,422,703	425,604	6,279,044	12,471,761	18	1,810	4,529,589	456,548	6,599,756	14,300,142
Ingersoll	27	1,342	3,425,098	241,735	12,376,258	19,993,156	26	1,264	3,494,311	230,876	10,086,758	16,871,612
Kingston	70	3,515	8,358,549	669,582	20,052,949	41,350,932	72	3,819	10,266,072	676,646	25,789,344	51,332,907
Kitchener	199	15,299	38,815,715	1,855,670	106,882,409	192,548,102	205	14,768	40,621,100	1,833,228	95,068.796	189,465,624
Leamington	16	1,151	2.953,713	319,702	12,648,612	26,635,680	18	1,311	3,482,240	317,961	15,056,454	30,480,899
Leaside	62	10,711	32,424.568	1,321,810	66.080,619	132,147,814	61	10,572	33,652,212	1,430,188	68,325,132	137,842,621
Lindsay	38	1,497	3,201,129	286,836	5,259,501	11,222,564	36	1,711	3,965,186	321,816	5.411,098	13,232,834
London	273	15,417	40,515,061	2,193,653	79,059,030	167,350,784	278	15,615	43,354,177	2,315,110	80,293,169	177,204,397
Long Branch	34	1,655	4,721,256	191,547	7,639,173	18,089,442	29	1,675	5,149,663	233,226	9,774,252	22,146,326
Merritton	17	2,058	7,074,806	1,011,228	15,379,199	29,552,654	16	2,145	7,735,871	1,072,685	15,881,727	30,951,709
Midland	21	1,140	2,437,997	98,284	9,588,281	13,759,448	23	1,308	3,495,845	105,920	10,528,263	16,030,415
Milton	14	654	1,793,207	363,725	2,851,453	6,927,799	15	667	1,765.479	344,579	1,908,569	6,403,769
Mimico	34	728	1,880,639	139,128	2.432,248	6,164,642	34	629	1,778,627	144,378	2,937,735	6,868,422
New Liskeard	15	619	1,193,667	48.402	2.530,479	4,862,933	16	549	1,171,524	50,748	2,642,542	5,107,535
Newmarket	18	958	2,448,439	133,771	5,416,327	9,571,176	24	921	2,567,514	139,979	4,309,792	10,377,778
New Toronto	46	7,214	23,122,818	1,857,295	91,080,195	158,329,039	50	7,221	25,215,564	1,850,671	88,011,979	158,289,059
Niagara Falls	78	6,830	20,616,294	5,836,398	39,714,585	93,698,367	84	6,950	22,771,033	6,139,926	40,593,491	100,851,047
North Bay	33	671	1,611,680	129,095	2,449,728	5,320,001	31	606	1,626,045	133,582	2,560,715	5,521,355

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[1] *See* footnote 1, end of table, p. 717.

[2] *See* headnote to this table.

11.—Statistics of Manufactures of Urban Centres, each with Factory Shipments[1] of $5,000,000 or over and with Three or More Establishments, 1952, with Comparable Figures for 1951—concluded

Province and Municipality	1951						1952					
	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Gross Value of Products[1]	Establishments	Employees	Salaries and Wages	Cost of Fuel and Electricity	Cost of Materials	Value of Factory Shipments[1]
	No.	No.	$	$	$	$	No.	No.	$	$	$	$
Ontario—concluded												
Oakville	48	1,455	3,751,301	260,050	6,668,853	14,747,707	54	1,379	3,859,130	244,104	6,349,319	14,991.388
Orillia	51	2,200	5,088,750	331,667	7,390,790	15,035,614	55	2,149	5,761,268	377,060	6,255,880	14,867,022
Ottawa	292	10,342	25,581,886	1,954,726	42,787,066	95,358,914	294	10,561	28,070,513	1,904,469	44,223,524	97,725,356
Owen Sound	52	2,737	6,437,240	309,993	8,010,216	18,405,577	50	2,656	6,895,253	305,169	6,835,905	19,328,116
Paris	26	1,506	3,505,063	137,553	6,862,153	13,339,812	25	1,376	3,469,667	148,570	6,981,856	12,245,885
Pembroke	35	1,256	2,640,670	134,595	4,346,820	9,729,314	36	1,445	3,185,073	181,595	6,332,316	12,186,453
Perth	27	922	1,732,153	98,041	4,445,751	8,528,770	24	873	1,793,063	103,732	5,050,091	9,343,904
Peterborough	103	10,010	28,853,445	1,252,959	77,955,438	124,655,905	101	9,758	30,350,387	1,254,144	67,769,544	122,971,772
Port Arthur	55	2,559	7,965,591	1,697,581	16,970,186	39,305,452	62	3,111	9,894,793	1,741,704	20,567,096	44,738,614
Port Hope	27	1,094	3,293,166	338,143	4,705,614	10,658,514	27	1,041	3,182,736	286,518	3,979,073	11,065,515
Preston	37	2,855	6,877,853	268,353	10,566,246	21,710,851	36	2,556	6,779,838	246,195	9,521,337	21,248,418
Renfrew	28	887	1,795,893	154,714	4,196,647	7,324,359	30	1,078	2,484,623	204,581	4,083,979	7,695,980
St. Catharines	110	11,697	35,717,017	1,679,247	64,119,327	131,178.237	104	11,975	38,327,182	1,954,059	62,302,387	134,364,249
St. Mary's	12	558	1,501,755	1,020.733	5,001,499	10,137,497	12	555	1,781,000	1,005,857	4,587,103	10,511,170
St. Thomas	45	2,494	5,803,065	314,299	10,870,798	22,121,001	47	2,170	5,789,091	348,231	9,507,632	21,921,121
Sarnia	52	8,001	25,981,735	12,381,523	107,491,357	194,290,568	49	8,172	29,221,061	11,564,392	110,032,405	198,878,634
Sault Ste. Marie	53	8,088	25,545,411	10,136,230	68,484,406	133,911,798	57	8,196	29,470,481	7,303,378	68,685,620	136,356,712
Simcoe	31	1,402	3,340,583	224,101	20,209,000	28,873,235	30	1,344	3,564,411	236,833	21,580,993	28,780,582
Smith's Falls	22	829	2,020,911	140,326	3,491,079	6,883,992	23	922	2,508,480	155,154	4,870,045	8,867,852
Stratford	66	3,690	8,868,857	435,277	15,423,515	29,382,849	65	3,459	9,193,044	393,866	15,161,722	28,638,669
Streetsville	14	348	823,535	146,725	3,934,256	5,739,710	13	366	919,140	150,872	4,648,992	7,263,170
Sudbury	52	1,064	2,559,768	233,816	6,280,757	11,684,423	56	1,114	3,019,606	274,936	7,143,703	13,770,607
Swansea	13	827	2,486,430	257,652	5,264,770	11,462,908	13	841	2,821,074	296,113	5,826,635	12,317,644
Thorold	24	2,330	9,042,620	3,132,261	20,419,354	43,212,078	23	2,633	10,097,534	3,037,372	20,909,486	42,303,543
Tillsonburg	27	890	1,903,427	221,817	8,789,487	11,964,719	28	891	2,042,954	243,078	11,935,937	15,263,283
Timmins	23	510	1,135,197	71,731	2,234,247	4,250,412	27	698	1,767,103	107,953	3,156,858	6.649,390
Toronto	3,796	151,333	415,206,705	17,599,992	991,268,163	1,763,192,114	3,825	149,020	439,286,411	17,313,945	945,304,350	1,790,369,192
Trenton	30	1,432	3,292,884	433,159	8,125,088	15,067,513	30	1,315	3,504,947	422,257	8,205,015	16,287,493
Wallaceburg	25	2,770	7,636,578	1,209,292	13,874,789	30,221,046	28	2,370	7,077,067	1,134,903	10,000,894	22,989,541
Waterloo	55	2,702	6,853,941	394,832	12,736,181	34,368,408	59	2,506	7,269,173	400,476	12,465,675	37,903,657
Welland	57	8,878	29,600,073	5,708,473	66,963,015	142,357,821	61	9,337	32,945,066	6,394,883	77,470,746	157,543,465
Weston	51	2,789	7,454,493	486,450	15,353,247	29,129,119	62	2,830	8,254,295	515,314	17,218,009	33,141,239
Windsor	297	34,865	112,076,215	5,436,889	351,697,300	626,292,546	330	36,628	130,027,457	6,027,143	377,637,512	646,949,316
Woodstock	64	3,842	9,381,940	468,744	27,936,571	48,347,755	60	3,796	10,283,114	473,235	27,867,896	49,635,138

Manitoba—												
Brandon	38	746	1,757,112	192,372	10,275,712	15,463,055	40	789	2,122,087	221,582	10,172,980	14,190,241
St. Boniface	90	4,168	11,555,289	1,010,336	108,630,649	135,391,546	93	4,269	12,610,430	1,002,948	101,397,296	129,841,407
Selkirk	10	985	2,625,168	463,242	3,016,278	8,901,414	10	1,046	3,179,404	510,864	3,506,100	10,228,696
Transcona	5	2,539	6,988,652	365,388	13,018,994	22,363,958	6	2,669	7,653,405	325,617	14,568,917	24,372,547
Winnipeg	849	27,704	65,741,785	3,759,880	167,583,852	292,496,767	843	28,162	70,744,396	3,157,945	160,844,930	296,263,701
Saskatchewan—												
Moose Jaw	45	1,312	3,510,432	675,784	32,959,182	41,737,517	49	1,400	3,922,396	820,644	29,916,533	39,567,108
Prince Albert	29	980	2,366,049	184,670	12,459,220	17,950,088	32	1,057	2,736,958	203,435	12,518,809	19,955,777
Regina	137	2,968	7,878,630	1,332,864	42,105,739	61,895,799	138	2,974	8,590,115	1,368,700	35,996,622	60,215,968
Saskatoon	112	2,710	6,626,626	763,370	46,224,336	63,296,870	113	2,856	7,874,973	818,070	45,504,270	65,404,156
Alberta—												
Calgary	309	8,658	22,905,049	1,929,664	108,014,389	152,276,862	315	9,436	27,229,084	2,116,071	107,347,213	162,523,554
Edmonton	319	9,422	24,252,814	1,256,372	98,578,420	142,609,969	330	10,206	27,671,393	1,068,351	99,724,643	153,099,237
Lethbridge	46	969	2,239,796	161,897	6,474,143	12,567,187	49	1,051	2,618,977	171,240	6,810,915	14,237,907
Lloydminster Point	[2]	[2]	[2]	[2]	[2]	[2]	8	219	693,930	208,728	4,885,005	8,290,260
Medicine Hat	36	1,066	2,320,993	142,840	16,801,931	21,689,296	42	1,080	2,490,035	148,131	17,659,629	22,709,914
British Columbia—												
Kamloops	34	532	1,218,773	93,570	1,829,497	4,070,243	46	593	1,485,934	112,963	2,145,626	5,023,439
Kelowna	35	803	1,763,721	88,908	3,154,611	6,804,221	41	716	1,800,998	83,705	3,295,323	7,248,034
Merritt	8	169	454,262	19,363	805,625	1,632,009	10	199	576,085	37,290	1,097,340	2,193,449
Nanaimo	31	567	1,523,558	105,534	3,347,376	6,018,399	25	434	1,313,309	94,787	2,473,821	5,328,504
Nelson	36	546	1,220,927	95,155	2,525,961	5,239,596	32	521	1,348,356	106,811	2,982,389	5,699,059
New Westminster	112	6,893	19,342,236	1,099,430	62,834,204	111,953,965	118	6,429	19,182,949	1,208,088	59,926,452	106,730,574
North Vancouver	55	2,326	7,350,810	322,627	11,371,750	22,907,846	56	2,430	8,227,887	317,986	10,725,560	25,924,333
Port Alberni	24	1,992	6,551,550	272,467	16,393,831	39,388,649	21	2,314	7,117,302	220,899	15,847,376	34,713,846
Port Moody	7	662	1,891,245	14,526	5,435,638	9,048,183	5	454	1,626,307	13,110	3,424,734	5,885,881
Prince George	150	1,746	4,057,829	357,241	11,484,528	20,411,592	141	1,776	5,068,859	434,599	13,331,966	24,442,995
Prince Rupert	25	630	1,850,690	109,814	4,760,547	8,104,135	27	589	1,696,964	136,994	3,842,656	5,835,526
Quesnel	68	685	1,504,263	126,068	2,596,925	5,660,301	71	728	1,996,897	177,605	3,560,394	6,894,547
Vancouver	1,255	34,376	96,222,111	5,180,626	270,748,863	461,594,390	1,275	33,296	102,163,999	5,292,224	248,964,894	437,663,057
Victoria	216	4,555	12,179,944	755,082	22,956,939	46,438,513	211	4,478	13,452,543	811,878	22,228,556	47,028,395

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[1] In 1952, gross value of products was replaced by value of factory shipments; *see* text, p. 633.

[2] *See* headnote to this table.

CHAPTER XVI.—CAPITAL EXPENDITURES AND CONSTRUCTION

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

This Chapter provides data on the capital expenditures made by all sectors of the Canadian economy on construction and on machinery and equipment together with summaries of other available statistics for the construction industry. Section 1 describes the purpose of capital expenditures and shows the amounts spent by each of the various industrial or economic sectors.[*] Section 2 brings together a number of summaries of related series on construction activity: value of work performed by type of structure, value of materials used, salaries and wages paid and numbers employed; contracts awarded and building permits issued; construction of dwelling units, and Government aid to house building.

Section 1.—Capital Expenditures on Construction and on Machinery and Equipment

One of the most important determinants of the level of economic activity within the nation at any time is the volume of investment spending being undertaken by business and by governments. Past experience shows that, for the nation as a whole, extensive changes can take place from year to year in the level of investment and it is because of this variability that capital expenditures form one of the most dynamic factors affecting the level of employment and income in a country.

Capital expenditures are those outlays made to replace, modernize or expand the nation's stock of physical capital, represented by such things as factory buildings, mines, stores, theatres, hospitals, railways, telephone lines and power installations, together with the machinery and equipment used to enable workers to produce with greater efficiency an increasing volume of goods and services. Also included in the stock of capital are government-owned assets of a physical nature, such as roads, canals and office buildings, and all housing, whether rented or owner-occupied.

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[*] *See also* Introduction to this Volume entitled "The Canadian Economy in 1954". Information is given in greater detail in the Department of Trade and Commerce Annual Reports, *Private and Public Investment in Canada.*

Defence construction is included but all other defence expenditures are excluded. Excluded also from capital expenditures are outlays for the accumulation of inventories and the acquisition cost of land.

Designed to last, capital assets assist in providing goods and services over a period of years; some types of assets, such as motors, may have a useful life of a very few years while others, such as buildings or power installations, may continue in profitable use for fifty years or more. The creation of these capital assets requires the diversion of resources from production for current consumption to the production of capital goods which will be used in production for future consumption. Thus, the rate of investment spending reflects the extent to which a growing nation is providing for the future, or is becoming industrialized; it also reflects the opinion of businessmen as to future prospects and of governments as to future demands for their services. It will be noted from Table 1 that since 1927 there have been two periods when capital spending accounted for a substantial portion of the gross national product.

1.—Capital Expenditures in Canada, 1927-54

Note.—Actual expenditures 1927-52, preliminary actual 1953, intentions as of May 1, 1954.

Year	Capital Expenditures	P.C. of Gross National Product	Year	Capital Expenditures	P.C. of Gross National Product
	$'000,000			$'000,000	
1927	1,087	19·2	1941	1,463	17·2
1928	1,296	21·2	1942	1,542	14·6
1929	1,518	24·6	1943	1,485	13·3
1930	1,287	23·2	1944	1,309	11·0
1931	881	19·3	1945	1,284	10·8
1932	491	13·0	1946	1,703	14·2
1933	327	9·2	1947	2,489	18·1
1934	416	10·3	1948	3,175	20·3
1935	505	11·6	1949	3,502	21·3
1936	590	12·6	1950	3,815	21·2
1937	828	15·5	1951	4,577	21·3
1938	773	14·8	1952	5,285	22·9
1939	765	13·4	1953	5,679	23·4
1940	1,048	15·3	1954	5,826	..

As indicated in Table 1 above, for the seventh successive year, total capital expenditures in 1954 will likely absorb more than one-fifth of the gross national product. This high rate of growth was paralleled in only one other period over the span for which data have been recorded. However, the capital expansion that took place during 1927-1931 was not sustained over such a long period as it has been during the post-war period, 1948-1954, and capital outlays exceeded 20 p.c. of gross national product for only three years. Investment spending at this level is indicative of the long-run development of the country, as well as being important in the year in which it is made in giving employment and income to those engaged in the provision of capital facilities. One of the most important recipients of benefit from the investment program, the construction industry, is dealt with in Section 2 of this Chapter.

The following tables give statistics of capital, repair and maintenance expenditures for the years 1952-1954. Of immediate interest are the estimates for 1954, indicating increased outlays for house building, retail outlets, office buildings, mining development, utilities and institutional facilities—mainly a continuation of the 1953 spending pattern.

2.—Summary of Capital Expenditures and Repair and Maintenance Expenditures by Economic Sector, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Agriculture and fishing—									
1952	82	473	555	65	113	178	147	586	733
1953	85	452	537	68	122	190	153	574	727
1954	83	386	469	71	130	201	154	516	670
Forestry—									
1952	19	20	39	20	28	48	39	48	87
1953	18	17	35	17	26	43	35	43	78
1954	17	15	32	15	21	36	32	36	68
Mining, quarrying and oil wells—									
1952	140	71	211	11	48	59	151	119	270
1953	189	91	280	13	45	58	202	136	338
1954	221	98	319	14	45	59	235	143	378
Manufacturing—									
1952	344	629	973	95	364	459	439	993	1,432
1953	307	633	940	91	377	468	398	1,010	1,408
1954	299	556	855	90	370	460	389	926	1,315
Utilities—									
1952	701	458	1,159	258	340	598	959	798	1,757
1953	722	446	1,168	275	352	627	997	798	1,795
1954	699	531	1,230	272	333	605	971	864	1,835
Construction industry—									
1952	5	68	73	3	69	72	8	137	145
1953	7	56	63	3	41	44	10	97	107
1954	9	37	46	3	38	41	12	75	87
Housing—									
1952	826	—	826	203	—	203	1,029	—	1,029
1953	1,086	—	1,086	213	—	213	1,299	—	1,299
1954	1,124	—	1,124	226	—	226	1,350	—	1,350
Trade, wholesale and retail—									
1952	96	101	197	33	33	66	129	134	263
1953	171	114	285	32	32	64	203	146	349
1954	216	138	354	34	32	66	250	170	420
Finance, insurance and real estate—									
1952	37	14	51	6	2	8	43	16	59
1953	61	16	77	7	2	9	68	18	86
1954	98	20	118	7	2	9	105	22	127
Commercial services—									
1952	29	67	96	11	41	52	40	108	148
1953	38	80	118	12	41	53	50	121	171
1954	18	73	91	11	41	52	29	114	143
Institutional services—									
1952	245	33	278	32	7	39	277	40	317
1953	268	33	301	35	8	43	303	41	344
1954	337	42	379	36	7	43	373	49	422
Government departments—[1]									
1952	739	88	827	175	35	210	914	123	1,037
1953	694	95	789	185	36	221	879	131	1,010
1954	733	76	809	219	31	250	952	107	1,059
Totals—									
1952	**3,263**	**2,022**	**5,285**	**912**	**1,080**	**1,992**	**4,175**	**3,102**	**7,277**
1953	**3,646**	**2,033**	**5,679**	**951**	**1,082**	**2,033**	**4,597**	**3,115**	**7,712**
1954	**3,854**	**1,972**	**5,826**	**998**	**1,050**	**2,048**	**4,852**	**3,022**	**7,874**

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[1] Includes expenditures of the Federal Government under the Capital Assistance program.

3.—Capital Expenditures and Repair and Maintenance Expenditures by Manufacturing Industries, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Food and beverages—									
1952	26·6	50·7	77·3	12·5	36·0	48·5	39·1	86·7	125·8
1953	26·1	57·3	83·4	12·7	35·9	48·6	38·8	93·2	132·0
1954	44·0	58·2	102·2	13·2	34·0	47·2	57·2	92·2	149·4
Tobacco and tobacco products—									
1952	0·5	1·8	2·3	0·5	1·3	1·8	1·0	3·1	4·1
1953	0·9	2·0	2·9	0·5	1·5	2·0	1·4	3·5	4·9
1954	1·0	3·1	4·1	0·6	1·5	2·1	1·6	4·6	6·2
Rubber products—									
1952	2·7	7·3	10·0	0·9	6·0	6·9	3·6	13·3	16·9
1953	3·2	9·2	12·4	1·2	6·0	7·2	4·4	15·2	19·6
1954	4·0	13·2	17·2	1·0	5·9	6·9	5·0	19·1	24·1
Leather products—									
1952	0·6	1·7	2·3	0·6	2·0	2·6	1·2	3·7	4·9
1953	0·7	1·7	2·4	0·6	2·1	2·7	1·3	3·8	5·1
1954	0·4	1·4	1·8	0·7	2·7	3·4	1·1	4·1	5·2
Textile products—									
1952	7·0	24·5	31·5	3·8	15·6	19·4	10·8	40·1	50·6
1953	6·0	19·8	25·8	3·1	18·2	21·3	9·1	38·0	47·1
1954	5·1	16·5	21·6	2·8	17·8	20·6	7·9	34·3	42·2
Clothing—									
1952	1·6	11·1	12·7	1·3	4·4	5·7	2·9	15·5	18·4
1953	3·9	10·2	14·1	1·6	4·4	6·0	5·5	14·6	20·1
1954	0·9	7·9	8·8	1·7	4·0	5·7	2·6	11·9	14·5
Wood products—									
1952	9·3	22·5	31·8	6·1	23·5	29·6	15·4	46·0	61·4
1953	8·5	22·1	30·6	6·6	24·2	30·8	15·1	46·3	61·4
1954	5·3	14·6	19·9	5·7	21·4	27·1	11·0	36·0	47·0
Paper products—									
1952	33·6	95·9	129·5	8·3	72·9	81·2	41·9	168·8	210·7
1953	24·4	74·4	98·8	6·5	71·7	78·2	30·9	146·1	177·0
1954	23·5	72·6	96·1	7·2	75·3	82·5	30·7	147·9	178·6
Printing, publishing and allied industries—									
1952	3·3	11·0	14·3	1·5	4·1	5·6	4·8	15·1	19·9
1953	3·9	11·6	15·5	1·9	4·0	5·9	5·8	15·6	21·4
1954	9·5	16·2	25·7	2·4	3·6	6·0	11·9	19·8	31·7
Iron and steel products—									
1952	46·2	89·7	135·9	16·1	64·8	80·9	62·3	154·5	216·8
1953	36·7	75·7	112·4	17·0	67·1	84·1	53·7	142·8	196·5
1954	17·9	64·4	82·3	14·9	63·6	78·5	32·8	128·0	160·8

3.—Capital Expenditures and Repair and Maintenance Expenditures by Manufacturing Industries, 1952-54—concluded

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Transportation equipment—									
1952	37·1	25·0	62·1	11·6	31·1	42·7	48·7	56·1	104·8
1953	44·1	49·2	93·3	11·0	31·9	42·9	55·1	81·1	136·2
1954	35·1	50·6	85·7	8·9	31·0	39·9	44·0	81·6	125·6
Non-ferrous metal products—									
1952	35·1	35·6	70·7	8·5	34·2	42·7	43·6	69·8	113·4
1953	29·6	48·7	78·3	7·0	37·7	44·7	36·6	86·4	123·0
1954	17·4	45·6	63·0	9·1	35·3	44·4	26·5	80·9	107·4
Electrical apparatus and supplies—									
1952	21·8	18·6	40·4	2·8	11·7	14·5	24·6	30·3	54·9
1953	15·9	16·9	32·8	2·4	13·2	15·6	18·3	30·1	48·4
1954	13·4	20·2	33·6	2·6	13·0	15·6	16·0	33·2	49·2
Non-metallic mineral products—									
1952	11·2	23·1	34·3	3·9	16·6	20·5	15·1	39·7	54·8
1953	9·9	21·7	31·6	2·0	21·6	23·6	11·9	43·3	55·2
1954	22·4	30·0	52·4	2·1	22·0	24·1	24·5	52·0	76·5
Products of petroleum and coal—[1]									
1952	41·1	36·4	77·5	11·2	9·5	20·7	52·3	45·9	98·2
1953	57·2	22·3	79·5	11·5	10·1	21·6	68·7	32·4	101·1
1954	78·1	17·7	95·8	11·7	11·4	23·1	89·8	29·1	118·9
Chemical products—									
1952	61·2	79·8	141·0	4·5	26·6	31·1	65·7	106·4	172·1
1953	33·7	93·8	127·5	4·4	24·1	28·5	38·1	117·9	156·0
1954	18·9	34·6	53·5	4·4	25·4	29·8	23·3	60·0	83·3
Miscellaneous—									
1952	4·7	4·1	8·8	1·1	3·2	4·3	5·8	7·3	13·1
1953	2·4	4·1	6·5	1·0	2·9	3·9	3·4	7·0	10·4
1954	2·3	5·0	7·3	0·9	2·7	3·6	3·2	7·7	10·9
Capital item charged to operating expenses—									
1952	—	90·2	90·2	—	—	—	—	90·2	90·2
1953	—	91·7	91·7	—	—	—	—	91·7	91·7
1954	—	84·2	84·2	—	—	—	—	84·2	84·2
Totals—[2]									
1952	**343·6**	**629·0**	**972·6**	**95·2**	**363·5**	**458·7**	**438·8**	**992·5**	**1,431·3**
1953	**307·1**	**632·4**	**939·5**	**91·0**	**376·6**	**467·6**	**398·1**	**1,009·0**	**1,407·1**
1954	**299·2**	**556·0**	**855·2**	**89·9**	**370·6**	**460·5**	**389·1**	**926·6**	**1,315·7**

[1] This industry group now includes natural gas absorption plants. [2] Capital expenditures made out of Federal Government Capital Assistance funds are not included in these figures.

4.—Capital Expenditures and Repair and Maintenance Expenditures by Utility Industries, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Central electric stations and gas works—									
1952	398·0	134·7	532·7	26·9	18·7	45·6	424·9	153·4	578·3
1953	420·2	94·8	515·0	32·5	24·8	57·3	452·7	119·6	572·3
1954	385·6	91·6	477·2	34·6	19·3	53·9	420·2	110·9	531·1
Steam railways and telegraphs—									
1952	92·2	146·1	238·3	192·6	186·6	379·2	284·8	332·7	617·5
1953	99·6	167·9	267·5	203·2	194·1	397·3	302·8	362·0	664·8
1954	82·0	231·1	313·1	189·2	175·9	365·1	271·2	407·0	678·2
Electric railways—									
1952	17·9	5·5	23·4	5·6	15·4	21·0	23·5	20·9	44·4
1953	12·5	13·2	25·7	5·4	14·5	19·9	17·9	27·7	45·6
1954	12·6	10·9	23·5	5·5	14·8	20·3	18·1	25·7	43·8
Water transport—									
1952	0·5	37·4	37·9	0·3	20·3	20·6	0·8	57·7	58·5
1953	0·2	32·4	32·6	0·2	18·8	19·0	0·4	51·2	51·6
1954	0·1	29·6	29·7	0·2	17·2	17·4	0·3	46·8	47·1
Motor carriers—									
1952	4·1	22·0	26·1	1·5	36·5	38·0	5·6	58·5	64·1
1953	3·1	16·8	19·9	1·3	30·0	31·3	4·4	46·8	51·2
1954	4·9	17·2	22·1	1·5	30·4	31·9	6·4	47·6	54·0
Grain elevators—									
1952	9·6	2·9	12·5	5·0	2·3	7·3	14·6	5·2	19·8
1953	9·7	3·2	12·9	4·3	3·0	7·3	14·0	6·2	20·2
1954	7·9	2·1	10·0	4·4	2·2	6·6	12·3	4·3	16·6
Telephones—									
1952	58·3	83·0	141·3	14·8	39·2	54·0	73·1	122·2	195·3
1953	64·5	83·3	147·8	14·6	43·5	58·1	79·1	126·8	205·9
1954	75·8	97·0	172·8	16·9	47·8	64·7	92·7	144·8	237·5
Broadcasting—									
1952	2·1	1·7	3·8	0·2	0·5	0·7	2·3	2·2	4·5
1953	1·7	2·6	4·3	0·3	0·7	1·0	2·0	3·3	5·3
1954	4·8	10·6	15·4	0·5	0·8	1·3	5·3	11·4	16·7
Municipal waterworks—									
1952	41·2	4·0	45·2	8·5	2·2	10·7	49·7	6·2	55·9
1953	34·7	3·4	38·1	9·8	3·7	13·5	44·5	7·1	51·6
1954	50·9	3·3	54·2	14·0	3·1	17·1	64·9	6·4	71·3
Other utilities—[1]									
1952	76·7	11·4	88·1	2·6	18·1	20·7	79·3	29·5	108·8
1953	75·7	19·2	94·9	3·3	19·2	22·5	79·0	38·4	117·4
1954	74·0	28·2	102·2	5·4	21·1	26·5	79·4	49·3	128·7
Capital items charged to operating expenses—									
1952	—	9·2	9·2	—	—	—	—	9·2	9·2
1953	—	9·2	9·2	—	—	—	—	9·2	9·2
1954	—	9·9	9·9	—	—	—	—	9·9	9·9
Totals—									
1952	**700·6**	**457·9**	**1,158·5**	**258·0**	**339·8**	**597·8**	**958·6**	**797·7**	**1,756·3**
1953	**721·9**	**446·0**	**1,167·9**	**274·9**	**352·3**	**627·2**	**996·8**	**798·3**	**1,795·1**
1954	**698·6**	**531·5**	**1,230·1**	**272·2**	**332·6**	**604·8**	**970·8**	**864·1**	**1,834·9**

[1] Includes air transport, warehousing and oil and gas pipelines.

5.—Capital Expenditures and Repair and Maintenance Expenditures by Trade and Finance Industries, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Trade—									
Wholesale—									
1952	20·0	18·1	38·1	4·5	7·0	11·5	24·5	25·1	49·6
1953	26·0	17·3	43·3	5·0	6·2	11·2	31·0	23·5	54·5
1954	28·9	14·5	43·4	3·4	5·1	8·5	32·3	19·6	51·9
Chain stores—									
1952	17·1	16·5	33·6	3·8	4·3	8·1	20·9	20·8	41·7
1953	29·6	19·3	48·9	3·9	4·1	8·0	33·5	23·4	56·9
1954	36·8	22·7	59·5	4·3	3·8	8·1	41·1	26·5	67·6
Independent stores—									
1952	38·8	38·0	76·8	14·0	12·2	26·2	52·8	50·2	103·0
1953	71·2	43·3	114·5	12·8	11·3	24·1	84·0	54·6	138·6
1954	91·0	54·9	145·9	16·0	12·0	28·0	107·0	66·9	173·9
Department stores—									
1952	3·9	4·0	7·9	3·7	2·3	6·0	7·6	6·3	13·9
1953	18·2	7·0	25·2	3·0	2·0	5·0	21·2	9·0	30·2
1954	27·9	13·1	41·0	3·9	1·9	5·8	31·8	15·0	46·8
Automotive trade—									
1952	15·6	14·8	30·4	7·0	6·8	13·8	22·6	21·6	44·2
1953	25·5	16·6	42·1	6·7	8·6	15·3	32·2	25·2	57·4
1954	31·8	19·7	51·5	6·3	9·2	15·5	38·1	28·9	67·0
Capital items charged to operating expenses—									
1952	—	9·9	9·9	—	—	—	—	9·9	9·9
1953	—	10·8	10·8	—	—	—	—	10·8	10·8
1954	—	12·6	12·6	—	—	—	—	12·6	12·6
Totals, Trade—									
1952	**95·4**	**101·3**	**196·7**	**33·0**	**32·6**	**65·6**	**128·4**	**133·9**	**262·3**
1953	**170·5**	**114·3**	**284·8**	**31·4**	**32·2**	**63·6**	**201·9**	**146·5**	**348·4**
1954	**216·4**	**137·5**	**353·9**	**33·9**	**32·0**	**65·9**	**250·3**	**169·5**	**419·8**
Finance—									
Banks—									
1952	9·3	4·9	14·2	2·8	0·9	3·7	12·1	5·8	17·9
1953	9·5	4·5	14·0	3·3	1·0	4·3	12·8	5·5	18·3
1954	16·8	5·0	21·8	2·4	0·9	3·3	19·2	5·9	25·1
Insurance, trust and loan companies—									
1952	8·9	1·9	10·8	1·2	0·5	1·7	10·1	2·4	12·5
1953	10·5	1·9	12·4	1·1	0·6	1·7	11·6	2·5	14·1
1954	19·6	2·3	21·9	1·4	0·6	2·0	21·0	2·9	23·9
Other financial—[1]									
1952	18·3	7·7	26·0	2·5	0·4	2·9	20·8	8·1	28·9
1953	40·9	10·1	51·0	2·8	0·5	3·3	43·7	10·6	54·3
1954	61·2	13·1	74·3	3·3	0·6	3·9	64·5	13·7	78·2
Totals, Finance—									
1952	**36·5**	**14·5**	**51·0**	**6·5**	**1·8**	**8·3**	**43·0**	**16·3**	**59·3**
1953	**60·9**	**16·5**	**77·4**	**7·2**	**2·1**	**9·3**	**68·1**	**18·6**	**86·7**
1954	**97·6**	**20·4**	**118·0**	**7·1**	**2·1**	**9·2**	**104·7**	**22·5**	**127·2**
Grand Totals—									
1952	**131·9**	**115·8**	**247·7**	**39·5**	**34·4**	**73·9**	**171·4**	**150·2**	**321·6**
1953	**231·4**	**130·8**	**362·2**	**38·6**	**34·3**	**72·9**	**270·0**	**165·1**	**435·1**
1954	**314·0**	**157·9**	**471·9**	**41·0**	**34·1**	**75·1**	**355·0**	**192·0**	**547·0**

[1] The largest part of this item is accounted for by expenditures of real estate companies and companies engaged in the sale of stocks and bonds. Most of the remainder is capital outlay by insurance agents and companies conducting personal and business credit operations.

6.—Capital Expenditures and Repair and Maintenance Expenditures by Service Industries, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Type of Enterprise and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Commercial Services—									
Laundries and dry cleaners—									
1952	0·8	3·1	3·9	1·0	2·3	3·3	1·8	5·4	7·2
1953	1·7	4·4	6·1	0·9	1·9	2·8	2·6	6·3	8·9
1954	0·8	3·5	4·3	0·8	1·6	2·4	1·6	5·1	6·7
Theatres—									
1952	2·3	1·8	4·1	0·6	0·5	1·1	2·9	2·3	5·2
1953	5·5	2·9	8·4	0·7	0·5	1·2	6·2	3·4	9·6
1954	3·8	3·0	6·3	0·7	0·6	1·3	4·5	3·6	8·1
Hotels—									
1952	11·8	5·5	17·3	8·2	6·1	14·3	20·0	11·6	31·6
1953	12·5	6·2	18·7	8·8	6·5	15·3	21·3	12·7	34·0
1954	4·8	4·2	9·0	8·2	6·1	14·3	13·0	10·3	23·3
Other commercial services—[1]									
1952	13·8	57·1	70·9	1·4	31·5	32·9	15·2	88·6	103·8
1953	18·2	66·4	84·6	1·3	32·1	33·4	19·5	98·5	118·0
1954	8·4	62·7	71·1	1·4	32·7	34·1	9·8	95·4	105·2
Totals, Commercial Services—									
1952	**28·7**	**67·5**	**96·2**	**11·2**	**40·4**	**51·6**	**39·9**	**107·9**	**147·8**
1953	**37·9**	**79·9**	**117·8**	**11·7**	**41·0**	**52·7**	**49·6**	**120·9**	**170·5**
1954	**17·8**	**73·4**	**91·2**	**11·1**	**41·0**	**52·1**	**28·9**	**114·4**	**143·3**
Institutional Services—									
Churches—									
1952	25·2	1·8	27·0	5·2	0·8	6·0	30·4	2·6	33·0
1953	25·0	2·9	27·9	6·0	0·9	6·9	31·0	3·8	34·8
1954	27·8	3·3	31·1	6·2	1·0	7·2	34·0	4·3	38·3
Universities—									
1952	9·4	3·7	13·1	2·4	0·3	2·7	11·8	4·0	15·8
1953	15·7	3·6	19·3	2·2	0·3	2·5	17·9	3·9	21·8
1954	15·1	3·3	18·4	2·1	0·3	2·4	17·2	3·6	20·8
Schools—									
1952	129·3	15·6	144·9	14·1	2·0	16·1	143·4	17·6	161·0
1953	122·6	13·7	136·3	15·2	2·4	17·6	137·8	16·1	153·9
1954	142·0	14·1	156·1	17·1	2·1	19·2	159·1	16·2	175·3
Hospitals—									
1952	81·4	11·9	93·3	10·5	3·7	14·2	91·9	15·6	107·5
1953	104·4	13·5	117·9	11·3	4·4	15·7	115·7	17·9	133·6
1954	152·3	20·9	173·2	10·9	3·8	14·7	163·2	24·7	187·9
Totals, Institutional Services—									
1952	**245·3**	**33·0**	**278·3**	**32·2**	**6·8**	**39·0**	**277·5**	**39·8**	**317·3**
1953	**267·7**	**33·7**	**301·4**	**34·7**	**8·0**	**42·7**	**302·4**	**41·7**	**344·1**
1954	**337·2**	**41·6**	**378·8**	**36·3**	**7·2**	**43·5**	**373·5**	**48·8**	**422·3**
Government Departments—									
1952	738·9	88·2	827·1	175·5	34·8	210·3	914·4	123·0	1,037·4
1953	694·0	94·6	788·6	185·0	36·3	221·3	879·0	130·9	1,009·9
1954	732·6	76·5	809·1	219·2	30·5	249·7	951·8	107·0	1,058·8
Grand Totals—									
1952	**1,012·9**	**188·7**	**1,201·6**	**218·9**	**82·0**	**300·9**	**1,231·8**	**270·7**	**1,502·5**
1953	**999·6**	**208·2**	**1,207·8**	**231·4**	**85·3**	**316·7**	**1,231·0**	**293·5**	**1,524·5**
1954	**1,087·6**	**191·5**	**1,279·1**	**266·6**	**78·7**	**345·3**	**1,354·2**	**270·2**	**1,624·4**

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[1] Includes estimates for other commercial vehicles not covered, recreation and amusement centres other than theatres, professional services and independent restaurants.

7.—Summary of Capital Expenditures and Repair and Maintenance Expenditures by Province, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of May 1, 1954.

(Millions of Dollars)

Province and Year	Capital			Repair and Maintenance			Capital, Repair and Maintenance		
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment	Total
Newfoundland—									
1952	56	30	86	18	22	40	74	52	126
1953	49	29	78	20	17	37	69	46	115
1954	52	31	83	19	16	35	71	47	118
Prince Edward Island—									
1952	8	9	17	5	4	9	13	13	26
1953	9	8	17	4	4	8	13	12	25
1954	10	8	18	5	3	8	15	11	26
Nova Scotia—									
1952	81	52	133	38	32	70	119	84	203
1953	96	57	153	42	32	74	138	89	227
1954	115	61	176	40	33	73	155	94	249
New Brunswick—									
1952	55	49	104	33	33	66	88	82	170
1953	62	40	102	34	28	62	96	68	164
1954	74	47	121	34	28	62	108	75	183
Quebec—									
1952	843	440	1,283	209	273	482	1,052	713	1,765
1953	865	419	1,284	212	278	490	1,077	697	1,774
1954	966	437	1,403	220	276	496	1,186	713	1,899
Ontario—									
1952	1,137	762	1,899	321	399	720	1,458	1,161	2,619
1953	1,306	763	2,069	334	413	747	1,640	1,176	2,816
1954	1,368	740	2,108	342	409	751	1,710	1,149	2,859
Manitoba—									
1952	139	103	242	60	57	117	199	160	359
1953	154	104	258	64	56	120	218	160	378
1954	159	113	272	62	53	115	221	166	387
Saskatchewan—									
1952	138	175	313	63	57	120	201	232	433
1953	161	169	330	60	58	118	221	227	448
1954	184	170	354	61	59	120	245	229	474
Alberta—									
1952	384	218	602	71	89	160	455	307	762
1953	476	249	725	83	86	169	559	335	894
1954	534	196	730	84	89	173	618	285	903
British Columbia—[1]									
1952	419	185	604	95	112	207	514	297	811
1953	467	195	662	97	110	207	564	305	869
1954	405	169	574	97	106	203	502	275	777
Canada—									
1952	**3,260**	**2,023**	**5,283**	**913**	**1,078**	**1,991**	**4,173**	**3,101**	**7,270**
1953	**3,645**	**2,033**	**5,678**	**950**	**1,082**	**2,032**	**4,595**	**3,115**	**7,710**
1954	**3,867**	**1,972**	**5,839**	**964**	**1,072**	**2,036**	**4,831**	**3,044**	**7,875**

[1] Includes Northwest Territories and Yukon.

The expenditures shown for each province represent the estimated value of construction work put in place in the province and the value of machinery and equipment acquired for use within the province. Such expenditures represent gross additions to the capital stock of the province, and are a reflection of economic activity in that area. However, part of the initial impact of these expenditures on employment and income may be felt in other regions. For example, heavy investment in western oil refineries and pipelines may mean increased activity in the steel industry of Ontario as well as construction activity in the Prairies.

The totals for 1954 shown in Table 7 are not the same as those shown in Tables 1 to 6 inclusive. In Tables 1 to 6 the estimates are based on the result of a mid-year survey taken in June 1954, whereas in Table 7, the estimates are based on a survey taken at the end of 1953.

Section 2.—The Construction Industry

Subsection 1.—Value of Construction Work Performed

The statistics given in this Subsection are comparable with those shown in the 1954 Year Book but not with the data of earlier Year Books. Previously, statistics of construction activity were obtained from questionnaires received from organizations putting the work in place, mainly construction contractors. The statistics are now based largely on information received from organizations and individuals paying for the work done by contractors and by the organizations' own labour forces; they are collected at the same time and from the same sources as the capital expenditures data given in the previous Section. This fundamental change in the source of basic data introduced a new construction series.

The change in sources enables more realistic estimates to be made of the total cost of construction and ensures that construction data are based on the same definitions and coverage as the capital expenditures series. The present source provides data on the total cost of a structure including all indirect costs such as legal, architectural and engineering fees in addition to payments made to contractors. When information was collected from construction contractors it was necessary to provide respondents with an arbitrary definition of what was to be considered as new construction. Then, all work exceeding $2,000 in value was classified as new. The present definition classifies as new only those projects which are charged to the capital or fixed assets account of a firm. Also, in the new series, oil-well drilling and certain below-surface mine workings are treated as part of construction. Further, in previous construction surveys only the larger projects undertaken by the labour forces of organizations whose primary activity was other than construction, were covered. The present method of obtaining construction expenditures from all industries results in more complete coverage in terms of the total value of work performed.*

The data shown in the tables of this Subsection represent the estimated total value of all new and repair construction. The slight differences between these figures and corresponding statistics of the previous Section are owing to rounding and minor revisions.

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* Information is given in greater detail in the DBS Annual Report, *Construction in Canada*.

Total value of the intended construction program in Canada for 1954, both new and repair, is estimated at $4,830,000,000 as compared with $4,595,000,000 in 1953 and $4,199,000,000 in 1952. This estimate covers all sectors of the Canadian economy—business, institutions, governments and housing. The estimate for 1954 is larger than the estimated amount spent in 1953—making the eighth successive year since 1946 to show an increase over the previous year. Expressed as a percentage, it is the smallest increase amounting to only 5 p.c. over the previous year. The program for 1954 is not expected to have the same impact on the expanded construction industry as the programs of some of the earlier post-war years when the supply situation, for both labour and materials, was much more restricted.

The trend of construction volume is indicated in Table **8** which shows construction, both new and repair, in constant as well as in current dollars. Total construction is also shown in this table as a percentage of gross national product in terms of both current and constant dollars. Though the total value of construction rose by 128 p.c. between 1947 and 1953 the volume of construction as indicated by the constant dollar data, recorded an increase of only 50 p.c. (This shows that price changes must be taken into account in any comparison of value.) It is also apparent from the constant dollar figures in Table **8** that practically all of the increased activity since the end of World War II has been in new construction, and that repair has remained at about the same level. Repair work is a much smaller proportion of the total construction now than in the earlier years. In 1947, repair and maintenance construction accounted for 29 p.c. of total volume as compared with 20 p.c. in 1954.

8.—Value of Construction Work Performed, Current and Constant (1949) Dollars, 1947-54

Note.—Actual 1947-52, preliminary actual 1953, intentions as of January 1954.

(Millions of Dollars)

Year	New Construction		Repair and Maintenance Construction		Total Construction		Total Construction as P.C. of Gross National Product	
	Current	Constant	Current	Constant	Current	Constant	Current	Constant
1947[1]	1,424	897	592	696	2,016	2,377	14·6	15·4
1948[1]	1,877	1,049	694	720	2,571	2,667	16·5	17·0
1949	2,124	1,129	732	732	2,856	2,856	17·3	17·5
1950	2,366	1,196	766	727	3,132	2,974	17·2	17·2
1951	2,734	1,248	927	783	3,661	3,091	17·0	16·9
1952	3,263	2,609	916	732	4,199	3,357	18·1	17·2
1953	3,646	2,831	949	735	4,595	3,566	18·9	17·6
1954	3,866	..	964	..	4,830	..	..	..

[1] Exclusive of Newfoundland.

Estimates of the value of work performed by construction contractors and by others in various branches of industry, business and government who use their own labour force to perform construction work are given in Table **9**. There is little indication of any change from year to year in the proportionate division of total construction work between these two categories. The construction industry proper accounted for about 72 p.c. of the total value of all work performed in each of the three years and the remaining 28 p.c. was undertaken by other business and government bodies. A further elaboration of these data and their relationship to numbers employed, salaries and wages paid, and value of materials used is given in Table **13**, p. 734.

9.—Value of Construction Work Performed by Contractors and by Others,[1] 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of January 1954.

(Millions of Dollars)

Type of Construction	1952	1953	1954
Contract Construction—			
New	2,642	2,923	3,112
Repair	386	360	378
Totals, Contract Construction	3,028	3,283	3,490
Other Construction—[1]			
New	641	723	754
Repair	530	589	586
Totals, Other Construction	1,171	1,312	1,340
Totals, Construction	**4,199**	**4,595**	**4,830**
New	**3,283**	**3,646**	**3,866**
Repair	**916**	**949**	**964**

[1] Represents work done by the labour forces of utilities, manufacturing, mining and logging firms and government departments, home-owner builders and other persons or firms not primarily engaged in the construction industry.

Of the total new and repair construction program of $4,830,000,000 estimated for 1954, building construction accounts for $2,914,000,000 or 60 p.c., and engineering work for $1,916,000,000 or 40 p.c. The estimate for each of these categories is above 1953 and 1952, but the proportion that each constitutes of the total program varies somewhat from year to year. Of the total, building construction accounted for 57·4 p.c. in 1952, 59·5 p.c. in 1953 and an estimated 60·3 p.c. in 1954, and engineering construction accounted for 42·6 p.c., 40·5 p.c., and 39·7 p.c. in 1952, 1953 and 1954, respectively.

10.—Value of Construction Work Performed, by Principal Type, 1952-54

NOTE.—Actual expenditures 1952, preliminary actual 1953, intentions as of January 1954.

(Millions of Dollars)

Type of Construction	1952		1953		1954	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
Building Construction—						
Residential	1,029	24·5	1,299	28·3	1,347	27·9
Industrial	509	12·1	497	10·8	472	9·8
Commercial	454	10·8	513	11·2	575	11·9
Institutional	314	7·5	336	7·3	422	8·7
Others	105	2·5	87	1·9	98	2·0
Totals, Building Construction	**2,411**	**57·4**	**2,732**	**59·5**	**2,914**	**60·3**
Engineering Construction—						
Road, highway and bridge	574	13·7	572	12·4	564	11·7
Waterworks and sewage systems	136	3·2	119	2·6	139	2·9
Dams and irrigation	66	1·6	61	1·3	35	0·7
Electric power	386	9·2	414	9·0	415	8·6
Railway, telephone and telegraph	296	7·0	314	6·8	308	6·4
Gas and oil facilities	215	5·1	281	6·1	349	7·2
Marine	70	1·7	59	1·3	68	1·4
Other engineering	45	1·1	43	0·9	39	0·8
Totals, Engineering Construction	**1,788**	**42·6**	**1,863**	**40·5**	**1,916**	**39·7**
Totals, Construction	**4,199**	**100·0**	**4,595**	**100·0**	**4,830**	**100·0**

Changes in the pattern of the construction program illustrating where shifts within the program are occurring from year to year are given in Table **11.** For example, of the $182,000,000 increase in building construction indicated for 1954, $48,000,000 is accounted for by housing, $29,000,000 by stores and $59,000,000 by hospitals. These increases are offset by a $30,000,000 decline in construction for factories, plants and workshops.

11.—Dollar Change in Value of Construction Work Performed, by Type of Structure, 1952 to 1953 and 1953 to 1954

Type of Construction	Change 1952 to 1953	Change 1953 to 1954
	$'000,000	$'000,000
Building Construction—		
Residential	270	48
Industrial	−12	−25
Factories, plants, workshops	*−49*	*−30*
Warehouses, storehouses, refrigerated storage, etc	*33*	*−8*
Grain elevators	*—3*	*−2*
Mine, mill buildings	*3*	*14*
Railway stations, works offices, roadway buildings	*2*	*−1*
Railway shops, engine houses, water and fuel stations	*2*	*−1*
Commercial	59	62
Hotels, clubs, restaurants, cafeterias, tourist cabins	*1*	*−12*
Office buildings	*10*	*35*
Stores (wholesale and retail), canteens, commissaries	*32*	*29*
Garages, service stations	*6*	*7*
Theatres, arenas, amusement and recreational buildings	*5*	*−4*
Farm buildings (excluding dwellings)	*6*	*0*
Radio, television broadcasting, relay and booster stations, telephone exchanges	*2*	*6*
Aircraft hangars	*−2*	*−3*
Passenger terminals, bus, boat or air	*0*	*1*
Laundries, dry cleaning establishments	*1*	*2*
Institutional	22	86
Schools, other educational buildings	*−2*	*22*
Churches, other religious buildings	*1*	*4*
Hospitals, sanatoria, clinics, first-aid stations, etc	*25*	*59*
Other institutional buildings	*−3*	*2*
Other building	−18	11
Armouries, barracks, drillhalls, etc	*−13*	*2*
Bunk houses, dormitories, cookeries, etc	*−6*	*8*
All other building construction	*2*	*−2*
Totals, Building Construction	**321**	**182**
Engineering Construction—		
Road, highway and bridge and aerodromes	−2	−8
Hard surfaced or paved streets, highways, parking lots, etc	*19*	*−2*
Engineering Construction —continued		
Road, etc.—concluded		
Gravel or stone surfaced streets, highways, roads, parking lots, etc	*−10*	*5*
Dirt, clay or other streets, roads, parking lots, etc	*−3*	*2*
Grading, scraping, oiling and filling	*10*	*−14*
Sidewalks and paths	*−2*	*3*
Bridges, trestles, culverts, overpasses, etc	*−4*	*3*
Tunnels, subways	*−7*	*−5*
Highway, roadside maintenance guard rails	*0*	*0*
Aerodromes, landing fields, runways, tarmac	*−5*	*0*
Waterworks and sewage systems	−17	20
Tile drains, drainage, ditches, storm sewers	*−2*	*2*
Waterworks systems and connections	*−8*	*13*
Sewage systems and connections	*−4*	*6*
Water storage tanks	*0*	*0*
Pumping stations, water	*−2*	*0*
Dams and irrigation	−5	−26
Dams and reservoirs	*3*	*−26*
Irrigation, land reclamation projects	*−8*	*0*
Electric power construction	28	1
Electric stations, power plants, distribution lines	*28*	*1*
Street lighting	*0*	*0*
Railway, telephone and telegraph	18	−6
Railway, tracklaying, surfacing	*11*	*−17*
Roadway maintenance, track	*2*	*0*
Signals and interlockers	*1*	*−1*
Telephone and telegraph lines, underground and marine cables	*14*	*13*
Fences, snowsheds, signs	*−10*	*0*
Road and highway surfacing and maintenance, railway	*−1*	*0*
Gas and oil facilities	66	68
Oil refineries	*19*	*17*
Pumping stations (oil and gas)	*−2*	*3*
Pipelines (oil)	*−5*	*−14*
Storage tanks (oil and gas)	*9*	*−5*
Pipelines (gas)	*19*	*25*
Wells (oil and gas)	*14*	*37*
Natural gas plants	*1*	*7*
Gas mains and services	[1]	*−2*

For footnote, *see* end of table.

11.—Dollar Change in Value of Construction Work Performed, by Type of Structure, 1952 to 1953 and 1953 to 1954—concluded

Type of Construction	Change 1952 to 1953	Change 1953 to 1954	Type of Construction	Change 1952 to 1953	Change 1953 to 1954
	$'000,000	$'000,000		$'000,000	$'000,000
Engineering Construction —continued			**Engineering Construction** —concluded		
Marine	−11	9	Other engineering construction	−2	−4
Docks, wharves, piers, breakwaters	*−3*	*1*	Park systems, landscaping, sodding, etc	*0*	*0*
Retaining walls, embankments, riprapping	*−1*	*0*	Mine shafts and underground workings	*4*	*−2*
Canals and waterways	*−4*	*1*	All other engineering construction	*−5*	*−2*
Dredging and pile driving	*−5*	*8*			
Dykes	*0*	*0*	**Totals, Engineering Construction**	**75**	**53**
Logging booms	*0*	*−1*			
Other marine construction	*1*	*−1*	**Totals, Value of Construction**	**396**	**235**

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[1] No change is shown here since data were not collected separately for this type of structure. Inasmuch as the over-all change for gas and oil facilities was calculated without regard to this fact, the sum of the value changes shown for the items in this group does not agree with the total change shown for the group.

Table **12** provides estimates of total expenditure in Canada on each type-of-structure classification for which the data are available. It contains detailed data from which Tables **10** and **11** were derived.

12.—Detailed Estimates of Value of Construction Work Performed, by Type of Structure, 1952-54

Note.—Actual expenditures 1952, preliminary actual 1953, intentions as of January 1954.

Type of Structure	1952			1953			1954		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Building Construction—									
Dwellings, single, double, duplexes and apartments	826,000	203,000	1,029,000	1,086,000	212,700	1,298,700	1,122,100	225,300	1,347,400
Factories, plants and workshops	284,809	76,885	361,694	238,853	73,961	312,814	214,146	69,224	283,370
Warehouses, storehouses, refrigerated storage, etc.	59,673	12,251	71,924	94,175	10,556	104,731	87,806	9,644	97,450
Grain elevators	10,006	4,799	14,805	8,205	4,155	12,360	6,145	3,809	9,954
Mine, mill buildings	20,850	3,798	24,648	23,790	3,798	27,588	37,872	4,160	42,032
Railway stations, works offices and roadway buildings	6,067	11,741	17,808	6,768	12,824	19,592	7,333	12,157	19,490
Railway shops, engine houses, water and fuel stations	7,423	10,280	17,703	8,505	11,328	19,833	8,863	10,633	19,496
Hotels, clubs, restaurants, cafeterias, tourist cabins	24,025	9,895	33,920	24,418	10,267	34,685	13,620	9,047	22,667
Office buildings	63,594	19,066	82,660	73,416	19,447	92,863	109,616	18,749	128,365
Stores, wholesale and retail, canteens, commissaries	51,398	14,685	66,083	83,520	14,008	97,528	112,104	15,325	127,429
Garages, service stations.	26,267	9,574	35,841	32,387	9,160	41,547	39,254	9,552	48,806
Theatres, arenas, amusement and recreation buildings	17,623	1,441	19,064	22,249	1,492	23,741	18,518	1,379	19,897
Farm buildings (excluding dwellings)	72,204	57,832	130,036	75,127	60,675	135,802	73,179	63,257	136,436
Radio, television broadcasting, relay and booster stations, telephone exchanges	59,138	1,150	60,288	60,106	1,752	61,858	65,776	1,840	67,616
Aircraft hangars	22,013	1,353	23,366	20,050	1,039	21,089	16,919	963	17,882

12.—Detailed Estimates of Value of Construction Work Performed, by Type of Structure, 1952-54—continued

Type of Structure	1952			1953			1954		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Building Construction—concluded									
Laundries, dry cleaning establishments	736	912	1,648	1,677	1,099	2,776	3,852	889	4,741
Passenger terminals, bus, boat or air	446	230	676	800	585	1,385	1,035	477	1,512
Schools, other educational buildings	135,268	16,933	152,201	132,503	17,961	150,464	153,015	19,129	172,144
Churches, other religious buildings	25,835	5,390	31,225	25,729	6,233	31,962	29,289	6,413	35,702
Hospitals, sanatoria, clinics, first aid stations, etc	81,013	12,526	93,539	106,276	12,738	119,014	163,993	13,818	177,811
Other institutional buildings	31,315	6,092	37,407	28,156	6,114	34,270	29,524	6,424	35,948
Armouries, barracks, drillhalls, etc	79,465	5,536	85,001	65,808	6,115	71,923	68,450	5,574	74,024
Bunkhouses, dormitories, cookeries, etc	13,074	6,363	19,437	8,800	4,005	12,805	19,510	2,861	22,371
All other building construction	792	136	928	2,344	291	2,635	1,111	382	1,493
Totals, Building Construction	**1,919,034**	**491,868**	**2,410,902**	**2,229,662**	**502,303**	**2,731,965**	**2,403,030**	**511,006**	**2,914,036**
Engineering Construction—									
Hard surfaced or paved streets, highways, parking lots, etc	144,100	53,171	197,271	160,843	54,792	215,635	157,084	56,835	213,919
Gravel or stone surfaced streets, highways, roads, parking lots, etc	87,300	27,688	114,988	75,216	29,783	104,999	79,683	30,094	109,777
Dirt, clay or other streets, roads, parking lots, etc	24,419	10,404	34,823	22,548	9,136	31,684	24,205	9,624	33,829
Grading, scraping, oiling, filling	73,011	24,712	97,723	81,465	26,845	108,310	64,436	29,716	94,152
Sidewalks, paths	16,047	3,009	19,056	14,388	2,821	17,209	16,894	2,855	19,749
Bridges, trestles, culverts, overpasses, etc	42,243	19,089	61,332	36,310	21,133	57,443	38,866	21,165	60,031
Tunnels, subways	20,106	498	20,604	13,541	429	13,970	8,871	409	9,280
Highway, roadside maintenance guard rails	1,276	2,761	4,037	1,153	2,760	3,913	1,337	2,919	4,256
Aerodromes, landing fields, runways, tarmac	23,405	651	24,056	18,030	483	18,513	18,279	451	18,730
Tile drains, drainage ditches, storm sewers	16,306	2,985	19,291	13,929	3,013	16,942	16,026	3,076	19,102
Waterworks systems, connections	48,483	6,838	55,321	37,210	9,751	46,961	45,101	15,041	60,142
Sewage systems, connections	43,848	6,142	49,990	40,907	5,151	46,058	47,091	5,290	52,381
Pumping stations, water	5,207	1,620	6,827	5,967	1,542	7,509	4,111	1,336	5,447
Water storage tanks	2,122	2,162	4,284	1,029	804	1,833	1,634	580	2,214
Dams and reservoirs	46,140	2,626	48,766	46,827	4,697	51,524	21,021	4,504	25,525
Irrigation and land reclamation	15,248	2,206	17,454	8,469	889	9,358	8,350	853	9,203
Electric stations, power plants, distribution lines	356,198	27,486	383,684	378,051	34,202	412,253	375,599	36,938	412,537
Street lighting	1,182	813	1,995	1,412	632	2,044	1,706	638	2,344
Railway tracklaying and surfacing	28,776	60,438	89,214	28,981	71,346	100,327	15,177	67,856	83,033
Roadway maintenance, track	13,815	81,182	94,997	12,713	84,420	97,133	17,699	79,018	96,717
Signals and interlockers	5,519	4,206	9,725	6,189	4,596	10,785	6,185	4,256	10,441
Telephone and telegraph lines, underground and marine cables	60,043	25,207	85,250	68,909	30,362	99,271	80,289	31,443	111,732
Fences, snowsheds, signs	5,589	9,952	15,541	1,623	4,330	5,953	1,564	4,162	5,726
Road or highway surfacing and maintenance, railway	682	674	1,356	233	92	325	76	80	156
Oil refineries	25,306	9,311	34,617	44,327	9,718	54,045	60,708	10,015	70,723

12.—Detailed Estimates of Value of Construction Work Performed, by Type of Structure, 1952-54—concluded

Type of Structure	1952			1953			1954		
	New	Repair	Total	New	Repair	Total	New	Repair	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Engineering Construction—concluded									
Pumping stations (oil and gas)	10,314	923	11,237	8,919	1,064	9,983	11,327	1,049	12,376
Pipelines (oil)	66,040	581	66,621	60,514	1,458	61,972	44,377	3,731	48,108
Storage tanks (oil and gas)	17,265	1,898	19,163	25,363	2,282	27,645	20,107	2,243	22,350
Pipelines (gas)	6,948	1,537	8,485	25,833	753	26,586	51,709	688	52,397
Oil and gas wells	72,458	1,520	73,978	86,697	1,633	88,330	122,229	3,133	125,362
Docks, wharves, piers, breakwaters	29,938	8,793	38,731	28,313	7,561	35,874	29,289	7,311	36,600
Retaining walls, embankments, riprapping	2,473	836	3,309	1,836	632	2,468	1,589	672	2,261
Canals and waterways	6,070	3,100	9,170	3,065	1,789	4,854	4,879	1,576	6,455
Dredging and pile driving	8,429	4,321	12,750	4,781	3,605	8,386	12,220	3,675	15,895
Dykes	2,234	284	2,518	2,287	374	2,661	2,606	358	2,964
Logging booms	956	1,037	1,993	379	1,339	1,718	856	401	1,257
Other marine construction	1,286	354	1,640	1,874	1,139	3,013	1,359	767	2,126
Incinerator construction	2,095	468	2,563	2,167	502	2,669	2,371	498	2,869
Park systems, landscaping, sodding, etc	5,754	3,157	8,911	5,678	3,246	8,924	6,252	3,222	9,474
Structural steel erection	1,904	—	1,904	...	...	[1]	...	...	[1]
Swimming pools, tennis courts, outdoor recreation facilities	883	906	1,789	832	844	1,676	837	836	1,673
Mineshafts and other below surface workings	14,172	1,345	15,517	17,992	2,480	20,472	15,619	2,074	17,693
Other engineering construction	7,716	7,522	15,238	19,713	2,287	22,000	23,256	1,782	25,038
Totals, Engineering Construction	**1,363,306**	**424,413**	**1,787,719**	**1,416,513**	**446,75**	**1,863,228**	**1,462,874**	**453,170**	**1,916,044**
Totals, Construction	**3,282,340**	**916,281**	**4,198,621**	**3,646,175**	**949,018**	**4,595,193**	**3,865,904**	**964,176**	**4,830,080**

[1] Not collected separately.

Principal statistics of the construction industry are shown by province and for contractors, utilities, governments and others in Table 13. Though the statistics given for Canada as a whole may be considered as relatively accurate, those given for individual provinces and by class of builder are approximations. All of the estimates given for average numbers employed, salaries and wages paid, and cost of materials used are based on ratios of these items to total value of work performed derived from survey work done in 1952 and applied to the total value of work figures. Although these ratios were calculated in some detail by type of industry, still further refinements are required. There are also some difficulties in obtaining the precise geographical location of projects undertaken or to be undertaken by large companies operating in a number of provinces. However, if used with these qualifications in mind the table provides useful estimates.

In using the employment data it is also of value to have a knowledge of the methods used in collecting the basic data on which the employment estimates are based. Respondents are requested to report the average number of employees engaged in construction each month. They are advised on the questionnaire that one method of computing the average number of employees is to divide the number of working days in the month into the total number of man-days worked by all employees in the month. The monthly averages are added and divided by twelve to compute the annual average. Thus, the resulting figures are representative of the total number of employees working full time throughout the year. The total number on the payroll at any given time may, of course, be above or below this average.

13.—Value of Construction Work Performed, Average Numbers Employed, Value of Materials Used and Salaries and Wages Paid, by Province and Contractor, 1952-54

NOTE.—Actual expenditures 1952, actual 1953, intentions as of January 1954.

Province, Contractor and Year		Average Employees	Salaries and Wages Paid	Cost of Materials Used	Value of Work Performed
		No.	$'000	$'000	$'000
Province					
Newfoundland	1952	9,771	25,154	37,932	74,370
	1953	8,691	23,036	35,336	68,277
	1954	8,786	23,599	36,503	70,252
Prince Edward Island	1952	1,962	4,272	6,352	12,747
	1953	1,902	4,342	6,496	12,950
	1954	2,079	4,836	7,273	14,528
Nova Scotia	1952	17,870	43,617	64,754	119,696
	1953	19,559	50,328	74,169	137,672
	1954	21,042	55,627	83,744	154,799
New Brunswick	1952	13,872	32,173	48,021	88,582
	1953	14,169	34,901	51,998	95,755
	1954	15,456	38,899	58,591	107,750
Quebec	1952	134,427	388,492	542,192	1,052,287
	1953	129,148	397,680	555,913	1,077,965
	1954	138,330	436,533	612,284	1,185,868
Ontario	1952	157,666	491,324	778,800	1,458.283
	1953	168,894	558,579	872,634	1,640,786
	1954	171,242	579,662	911,405	1,710,601
Manitoba	1952	25,740	71,270	102,194	198,690
	1953	26,641	78,196	112,771	218,307
	1954	25,948	78,410	114,342	220,637
Saskatchewan	1952	22,233	65,259	112,683	200,761
	1953	23,203	72,345	124,082	221,409
	1954	24,379	78,610	137,799	245,767
Alberta	1952	44,660	141,164	283,610	479,232
	1953	50,367	163,734	329,255	558,253
	1954	54,946	180,217	363,982	617,249
British Columbia	1952	49,752	191,169	245,380	513,973
	1953	51,204	210,202	268,631	563,819
	1954	45,970	188,377	239,910	502,629
Totals	**1952**	**477,953**	**1,453,894**	**2,221,918**	**4,198,621**
	1953	**493,778**	**1,593,343**	**2,431,285**	**4,595,193**
	1954	**508,178**	**1,664,770**	**2,565,833**	**4,830,080**
Contractors and Others					
Contractors	1952	295,991	969,094	1,617,129	3,027,205
	1953	302,200	1,047,922	1,756,864	3,283,376
	1954	317,030	1,110,190	1,875,177	3,489,640
Utilities	1952	77,842	214,597	249,136	499,797
	1953	84,091	248,343	284,133	573,603
	1954	83,805	253,202	290,096	586,330
Governments	1952	55,772	138,172	152,932	305,954
	1953	53,055	139,332	153,619	307,434
	1954	54,907	147,484	164,591	328,055
Others	1952	48,348	132,031	202,721	365,665
	1953	54,432	157,746	236,669	430,780
	1954	52,436	153,894	235,969	426,055

Subsection 2.—Contracts Awarded and Building Permits Issued

In this Subsection statistics are given of work actually in sight either as contracts awarded or as building permits. These figures are related to those of work performed during the year only so far as the work thus provided for is completed and duly reported in the capital expenditure surveys. Further, values of contracts awarded, and especially of building permits, are estimates (more often underestimates) of work to be done.

Contracts Awarded.—According to figures published by *MacLean Building Reports Limited,* the value of contracts awarded in 1953 increased by $204,883,000 or 11·3 p.c. over 1952. Substantial increases in residential and business construction more than compensated for the decreases in industrial and engineering construction. Increases in the value of construction contracts awarded in 1953 over the previous year, in the Provinces of New Brunswick, Quebec, Ontario and Saskatchewan more than offset decreases reported in the other provinces.

14.—Value of Construction Contracts Awarded, 1918-53

(Source: *MacLean Building Reports Limited*)

Note.—Includes Newfoundland from Apr. 1, 1949.

Year	Value of Construction Contracts	Year	Value of Construction Contracts	Year	Value of Construction Contracts
	$		$		$
1918	99,842,000	1930	456,999,600	1942	281,594,100
1919	190,028,000	1931	315,482,000	1943	206,103,900
1920	255,605,000	1932	132,872,400	1944	291,961,800
1921	240,133,300	1933	97,289,800	1945	409,032,700
1922	331,843,800	1934	125,811,500	1946	663,355,100
1923	314,254,300	1935	160,305,000	1947	718,137,100
1924	276,261,100	1936	162,588,000	1948	954,082,400
1925	297,973,000	1937	224,056,700	1949	1,143,547,300
1926	372,947,900	1938	187,277,900	1950	1,525,764,700
1927	418,951,600	1939	187,178,500	1951	2,295,499,200
1928	472,032,600	1940	346,009,800	1952	1,812,177,600
1929	576,651,800	1941	393,991,300	1953	2,017,060,700

15.—Value of Construction Contracts Awarded, by Province and Type of Construction, 1948-53

(Source: *MacLean Building Reports Limited*)

Province	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Newfoundland	...	3,431,100[1]	10,065,000	10,509,400	21,985,300	8,549,700
Prince Edward Island	2,410,300	4,498,500	2,663,500	3,251,000	3,489,000	1,254,300
Nova Scotia	36,624,200	33,941,600	35,643,300	67,837,000	78,502,000	54,355,800
New Brunswick	28,980,100	19,536,100	34,592,100	20,983,900	25,177,000	28,602,000
Quebec	327,111,900	355,408,300	533,971,700	480,106,000	397,931,400	539,818,600
Ontario	350,612,300	421,098,900	597,161,900	1,017,426,900	732,768,100	849,812,400
Manitoba	45,414,700	78,517,300	67,985,300	91,157,700	95,690,300	80,455,700
Saskatchewan	18,273,600	43,306,200	27,563,900	39,604,700	59,170,000	75,724,400
Alberta	74,071,700	104,380,600	134,878,500	183,075,100	231,191,300	215,010,900
British Columbia	70,583,600	79,428,700	81,239,500	381,547,500	166,273,200	163,476,900
Totals	**954,082,400**	**1,143,547,300**	**1,525,764,700**	**2,295,499,200**	**1,812,177,600**	**2,017,060,700**

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[1] Nine months.

15.—Value of Construction Contracts Awarded, by Province and Type of Construction, 1948-53—concluded

Type of Construction	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
RESIDENTIAL—						
Apartments	30,069,100	69,254,000	59,297,800	55,819,900	101,665,300	130,462,400
Residences	342,986,800	396,821,500	482,386,500	381,289,800	409,637,400	602,296,900
TOTALS, RESIDENTIAL	373,055,900	466,075,500	541,684,300	437,109,700	511,302,700	732,759,300
BUSINESS—						
Churches	16,425,500	21,677,400	24,100,400	25,274,900	26,455,700	32,009,200
Public garages	13,096,900	12,316,800	13,781,600	10,838,000	15,958,100	17,298,400
Hospitals	49,318,800	42,405,900	59,967,700	85,746,400	56,175,300	69,047,600
Hotels and clubs	27,628,800	16,957,500	41,611,000	32,095,700	23,055,600	32,399,800
Office buildings	34,137,900	40,031,400	53,240,200	29,108,200	39,640,300	78,035,900
Public buildings	19,919,400	46,078,800	61,834,500	150,483,700	149,351,000	111,235,600
Schools	79,156,000	80,982,500	99,296,400	139,938,800	130,398,800	119,009,200
Stores	42,348,000	36,218,400	43,677,100	33,497,100	41,999,300	81,197,300
Theatres	4,814,500	6,132,300	6,173,600	2,713,900	3,116,900	3,075,300
Warehouses	28,413,100	21,464,700	36,722,400	37,985,400	40,243,900	70,501,400
TOTALS, BUSINESS	315,258,900	324,265,700	440,404,900	547,682,100	526,394,900	613,809,700
INDUSTRIAL	74,878,100	104,040,300	141,043,200	451,753,200	245,851,100	230,925,800
ENGINEERING—						
Bridges	7,562,000	9,182,900	16,624,300	19,340,400	37,569,700	14,858,700
Dams and wharves	18,215,000	20,716,900	38,561,900	32,155,000	59,257,500	63,592,100
Sewers and water mains	20,038,600	27,856,400	31,005,800	63,333,300	44,919,300	46,385,500
Roads and streets	45,856,900	49,396,300	92,386,300	94,621,900	113,015,000	97,964,200
General engineering	99,217,000	142,013,300	224,054,000	649,503,600	273,867,400	216,765,400
TOTALS, ENGINEERING	190,889,500	249,165,800	402,632,300	858,954,200	528,628,900	439,565,900

Building Permits.—Statistics of building permits were first collected in 1910, when the series covered 35 urban centres; in 1920 they were extended to cover 58 municipalities, including unincorporated suburban areas, which were becoming increasingly important as residential areas for persons working within the municipal boundaries of urban centres. In 1940, the series was again extended to cover 204 municipalities and in 1948 the coverage was expanded further to include 507 municipalities. However, until plans are advanced, it is felt desirable to maintain comparability with earlier issues of the Year Book by retaining the '204' list.

The estimated value of proposed construction as indicated by building permits in 204 municipalities issued in 1953 amounted to $1,088,879,902, an increase of 36 p.c. over the 1952 value of $802,737,975.

16.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities, 1952 and 1953

NOTE.—Statistics for these series covering years previous to 1952 will be found in the corresponding tables of earlier editions of the Year Book. For the 35 cities marked (●) the record goes back to 1910; the 23 places marked (○) were added in 1920.

Province and Municipality	1952	1953	Province and Municipality	1952	1953
	$	$		$	$
Prince Edward Island—			**Nova Scotia**—concluded		
○Charlottetown	401,690	332,525	Liverpool	53,350	91,200
			○New Glasgow	288,534	2,433,520
Nova Scotia—			New Waterford	35,100	19,700
Amherst	1,135,330	453,148	North Sydney	622,700	164,700
Bridgewater	209,950	286,150	●Sydney	977,577	1,772,273
Dartmouth	1,153,875	4,404,000	Sydney Mines	174,300	13,700
Glace Bay	329,231	381,482	Truro	484,215	627,985
●Halifax	7,777,130	11,090,934	Yarmouth	150,075	106,550

16.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities, 1952 and 1953—continued

Province and Municipality	1952	1953
	$	$
New Brunswick—		
Campbellton	264,068	954,484
Chatham	17,300	31,900
Dalhousie	477,400	274,300
○Fredericton	2,208,683	3,058,437
●Moncton	3,896,950	5,613,036
Newcastle	132,900	162,600
●Saint John	2,737,073	3,287,405
St. Stephen	44,865	59,897
Quebec—		
Cap de la Madeleine	1,668,800	1,917,999
Chicoutimi	3,053,420	2,757,225
Coaticook	474,370	252,885
Drummondville	1,259,374	976,210
Granby	1,133,505	3,255,208
Grand'Mère	630,375	1,089,750
Hampstead	2,295,410	1,053,223
Hull	2,702,930	11,717,625
Iberville	564,550	547,205
Joliette	1,247,280	2,885,270
Jonquière	376,325	1,355,700
Lachine	8,280,467	5,372,424
Laprairie	213,200	403,775
La Tuque	275,650	327,910
Lévis	348,400	2,532,125
Longueuil	984,677	2,695,350
Mégantic	96,300	180,460
●Montreal (●Maisonneuve)	103,828,736	125,339,648
Montreal East	1,564,415	3,181,658
Montreal North	3,928,700	2,973,350
Montreal West	311,700	433,000
Mount Royal	4,058,212	5,043,834
Noranda	951,640	204,100
Outremont	1,831,550	1,338,025
Point-aux-Trembles	490,350	1,164,475
Point Claire	2,011,395	3,985,993
●Quebec	6,262,531	11,491,664
Rimouski	891,050	2,171,200
Rivière-du-Loup	379,610	531,950
Rouyn	516,785	411,920
Ste. Agathe-des-Monts	233,300	120,500
Ste. Anne-de-Bellevue	122,110	319,720
St. Hyacinthe	2,797,950	1,402,950
St. Jean	3,225,520	2,631,875
St. Jérôme	1,279,705	1,236,055
St. Joseph	76,139	154,095
St. Lambert	3,179,940	2,563,095
St. Laurent	14,303,950	13,986,300
○Shawinigan Falls	2,278,220	1,616,135
●Sherbrooke	8,853,475	4,509,540
Sorel	1,053,980	801,205
●Three Rivers	2,923,525	6,558,200
Val d'Or	790,020	423,375
Valleyfield	1,493,530	2,336,440
Verdun	1,919,700	2,874,400
●Westmount	1,940,500	2,594,870
Ontario—		
Amherstburg	229,199	733,900
Barrie	1,656,025	3,019,116
○Belleville	1,420,931	2,513,822
Bowmanville	231,480	335,825
Bracebridge	133,400	110,600
Brampton	2,333,446	2,004,916
●Brantford	1,845,438	2,370,449
Brockville	1,261,572	2,579,835
Ontario—continued		
Burlington	1,158,450	3,520,412
Campbellford	65,052	145,650
○Chatham	2,260,804	2,149,813
Cobourg	6,960,960	2,939,585
Cochrane	255,299	353,768
Collingwood	223,508	288,452
Cornwall	1,130,280	766,766
Dundas	1,506,625	1,831,305
Eastview	1,796,943	2,067,625
Etobicoke Twp	35,641,689	50,861,303
Forest Hill	3,324,091	4,593,032
Fort Erie	771,133	1,122,914
Fort Frances	1,171,277	482,116
●Fort William	3,030,180	2,882,187
○Galt	3,479,249	3,080,454
Gananoque	132,162	220,940
Gloucester Twp	2,391,310	5,188,700
Goderich	161,365	836,130
●Guelph	3,076,573	10,554,711
Haileybury	82,875	173,175
●Hamilton	24,227,470	31,055,980
Hanover	153,000	164,750
Hawkesbury	992,175	190,910
Huntsville	132,650	75,000
Ingersoll	195,485	120,700
Kapuskasing	1,037,600	732,370
Kenora	599,979	814,490
●Kingston	4,221,737	5,090,641
Kirkland Lake (Teck Twp.)	204,696	250,050
●Kitchener	10,524,256	11,476,223
Leamington	1,143,637	654,350
Leaside	1,803,838	2,470,339
Lindsay	1,501,555	1,085,245
Listowel	211,875	176,040
●London	10,586,555	5,830,230
Long Branch	464,490	1,050,505
Napanee	39,000	187,500
Nepean Twp	3,270,996	3,336,240
New Liskeard	620,815	534,711
Newmarket	290,500	374,800
New Toronto	2,155,100	634,765
○Niagara Falls	1,972,734	1,658,367
North Bay	2,107,054	2,076,987
North York Twp	47,701,208	68,952,428
Oakville	2,993,670	3,190,472
Orillia	658,610	1,168,143
○Oshawa	9,885,076	17,363,718
●Ottawa	23,595,220	36,321,556
○Owen Sound	884,047	684,093
Paris	420,300	253,595
Parry Sound	182,225	356,000
Pembroke	2,418,200	1,937,075
Perth	168,170	237,450
●Peterborough	5,186,523	4,853,892
Petrolia	87,845	143,775
●Port Arthur	2,487,525	6,868,785
Port Colborne	1,193,481	2,319,365
Preston	938,054	1,162,218
Renfrew	559,040	873,950
○Riverside	1,463,952	3,234,057
●St. Catharines	3,392,256	3,418,661
St. Marys	975,150	395,310
●St. Thomas	1,646,356	1,135,469
○Sarnia	8,278,563	6,858,230
○Sault Ste. Marie	6,893,168	6,836,100
Scarboro Twp	36,301,565	48,527,135
Simcoe	1,047,350	712,225
Smith's Falls	287,400	862,700
●Stratford	797,111	1,403,447

16.—Estimated Value of Proposed Construction as Indicated by Building Permits Issued in 204 Municipalities, 1952 and 1953—concluded

Province and Municipality	1952	1953
	$	$
Ontario—concluded		
Sudbury	3,710,135	5,217,695
Swansea	738,469	663,821
Tillsonburg	308,695	723,420
Timmins	539,440	538,739
● Toronto	43,724,096	80,274,698
Trenton	817,197	1,124,021
Wallaceburg	336,524	629,812
Waterloo	2,283,108	5,163,470
○ Welland	2,437,511	1,406,963
Weston	1,407,989	1,563,912
Whitby	743,270	1,886,410
● Windsor	6,557,179	15,712,482
○ Woodstock	1,718,383	2,567,792
○ York Twp	11,251,270	13,990,855
York East Twp	8,393,277	8,797,716
Manitoba—		
● Brandon	1,790,795	2,953,846
Brooklands	105,650	239,100
Dauphin	605,070	1,062,140
North Kildonan	283,900	383,000
Portage la Prairie	1,146,925	911,085
○ St. Boniface	4,432,890[1]	2,293,215
Selkirk	595,000	497,815
The Pas	257,450	308,950
Transcona	324,687	700,725
● Winnipeg	19,293,200	21,868,300
Saskatchewan—		
Biggar	143,684	378,200
Estevan	234,484	625,299
Melville	390,750	542,600
● Moose Jaw	2,628,312	2,168,305
North Battleford	811,500	1,515,660
Prince Albert	2,034,995	3,624,800
● Regina	12,736,939	27,124,358
● Saskatoon	7,872,727	15,478,755

Province and Municipality	1952	1953
	$	$
Saskatchewan—concluded		
Swift Current	1,053,605	2,490,730
Weyburn	388,100	1,600,600
Yorkton	872,600	2,408,737
Alberta—		
● Calgary	38,784,242	42,145,384
Drumheller	287,740	124,200
● Edmonton	37,066,526	55,020,816
○ Lethbridge	4,741,855	7,381,690
○ Medicine Hat	2,373,080	3,961,220
British Columbia—		
Chilliwack	475,230	737,370
Cranbrook	472,254	237,492
Fernie	73,075	375,945
○ Kamloops	684,805	1,528,069
Kelowna	502,030	611,074
○ Nanaimo	976,797	1,696,017
Nelson	613,755	413,699
● New Westminster	2,096,485	4,764,407
○ North Vancouver	1,988,135	3,245,435
Prince George	2,238,160	2,140,500
○ Prince Rupert	1,037,257	354,061
Revelstoke	177,350	110,716
Rossland	316,261	149,962
Trail	2,880,729	1,544,284
● Vancouver	28,387,737	50,748,757
Vernon	300,518	878,146
● Victoria	3,988,003	6,094,247
Totals—		
204 Municipalities	**802,737,975**	**1,088,879,902**
58 Municipalities ● ○	**520,491,849**	**718,916,460**
35 Municipalities ●	**438,740,938**	**619,874,156**

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[1] No reports received for September, October and November 1952.

The indexes given in Table **17** show, as far as possible, the fluctuations in building costs and their effect upon construction work and employment. The relative proportions of material and wage costs in general building are difficult to determine since such proportions vary with the type of building and the centres studied. Pre-war experience, as indicated by a special study made for 15 cities, shows that the proportions of cost of materials to cost of labour in all construction average two-thirds for the former to one-third for the latter. The increase in the cost of recent building operations has probably been much more than is indicated by the increase in the indexes of wholesale prices and wages shown and the proportions of these items to total costs have, no doubt, undergone some variation owing to changes in types and methods of construction and to the greater use of machinery.

Four of the largest cities—Montreal, Toronto, Winnipeg and Vancouver—accounted for $278,231,403 or 26 p.c. of the value of building permits issued in 204 municipalities in 1953. In 1952, the same cities showed a value of $195,233,769, or 24 p.c. of the total for that year.

17.—Value of Building Permits Issued in 204 Municipalities and Index Numbers of the Building Construction Industries, 1943-53

NOTE.—These 204 municipalities are named in Table **16**.

Year	Value of Building Permits, 204 Municipalities	Average Index Numbers of—			
		Prices of Building Materials (1949=100)		Wages in Construction Industries[2] (1939=100)	Employment in Building Construction[3] (1949=100)
		Residential[1]	Non-residential		
	$				
1943	80,190,123	61·0	70·2	127·7	68·8
1944	128,728,465	64·3	70·9	129·6	40·9
1945	197,187,160	65·0	71·4	131·1	43·7
1946	383,596,698	67·8	75·0	143·9	62·6
1947	373,231,249	79·1	84·5	155·0	81·9
1948	536,057,597	95·4	95·9	176·3	91·4
1949	616,160,593	100·0	100·0	184·2	100·0
1950	801,765,092	106·4	105·0	194·0	104·7
1951	681,161,938	125·5	118·6	217·2	116·0
1952	802,737,975	124·9	123·2	235·2	127·1
1953	1,088,879,902	123·9	124·4	249·1	128·2

[1] Arithmetically converted from base 1935–39=100. [2] Compiled by the Department of Labour. [3] As reported by employers.

Subsection 3.—Government Aid to House Building*

Federal Government Assistance.—Type of Federal Government assistance to house building in Canada is primarily assistance to private builders including prospective home owners, merchant builders and investors in rental housing. In the nine-year period 1945-53, 10 p.c. of the new permanent dwellings completed were built directly on Government account and 27 p.c. represented private-enterprise dwellings for which some public assistance was provided.

The Federal Government carries on house-building operations under programs for the provision of Armed Services married quarters and, until 1953, veterans rental units. The Federal Government also undertakes joint rental housing projects in co-operation with the provincial governments. (*See* p. 746.)

Public assistance to private builders is provided under the terms of the National Housing Act, 1954, together with the Canadian Farm Loan Act, 1927, the Veterans' Land Act, 1942, and the Farm Improvement Loans Act, 1944. The National Housing Act, 1954, represents the Government's main legislation in the housing field. The chief form of public assistance to private builders under the previous National Housing Act, 1944, was the provision of funds for mortgage loans made jointly with private lenders, but under the new legislation, public assistance to private house building is mainly through a system of mortgage-loan insurance.

The Central Mortgage and Housing Corporation, the Federal Government agency responsible for the provision of most of the public assistance to housing, was incorporated by Act of Parliament passed in December 1945. It administers the present National Housing Act and earlier housing Acts and co-ordinates government activities in the housing field. The Corporation supervises the program for the construction of the Armed Services married quarters for the Department of National Defence.

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* Prepared in the Economic Research Department, Central Mortgage and Housing Corporation, Ottawa.

The National Housing Act, 1954.—The National Housing Act, 1954, came into force on Mar. 22, replacing the National Housing Act, 1944. It replaces the former joint loan provisions by a system of insured mortgages, provides for the participation of the chartered banks and Quebec savings banks in mortgage lending under the Act, and establishes the basis for a secondary market in insured mortgages by provisions which permit lenders approved under the Act to sell insured mortgages to individuals and other investors who are not approved lenders. Provision was also made for mortgage loans for home conversion. These loans are insured in the same way as are mortgage loans for the building of new structures.

A number of changes in the terms of loans made under the National Housing Act are introduced in the new legislation but many of the provisions of the National Housing Act are re-enacted either without change or with only minor modifications. Among these are provisions for federal-provincial co-operation in land assembly and development and in the construction and ownership of low-rental housing, and for federal assistance in housing redevelopment and the clearance of blighted areas.

Loans to limited dividend housing corporations and to primary producers, together with guarantees under the rental guarantee plan and guarantees of home improvement and extension loans are re-enacted. Loans for home improvement and extension, however, require an insurance charge of 1 p.c. of the amount of the loan. The powers of the Central Mortgage and Housing Corporation to make direct loans remain unchanged.

The insurance of a mortgage loan made under the Act requires that a single fee for the insurance be paid by the borrower at the time the loan is made. This fee is added to the amount of the approved loan and varies between $1\frac{3}{4}$ and $2\frac{1}{2}$ p.c. of the loan amount, according to the type of loan and whether progress advances are made or not. Insurance fees are deposited in, and claims are paid from, a Mortgage Insurance Reserve Fund administered by the Central Mortgage and Housing Corporation.

In an insurance claim the approved lender is required to complete such legal proceedings as are necessary to transfer the property, with clear title, to the Central Mortgage and Housing Corporation. The regulations under the Act require that the insurance claim be made within 30 days of the time the claimant acquires clear title. The settlement includes an allowance for principal, an allowance for interest, and an allowance for settlement costs. The claimant receives 98 p.c. of the amount owing on the principal of the loan at the time foreclosure proceedings were instituted or, where no such proceedings were involved, at the time the property was acquired. The payment also includes the full amount of such approved charges as were advanced to the borrower in order to maintain the security of the mortgage, *e.g.*, fire insurance premiums. The allowance for interest payments in default at the time the property is conveyed to the Corporation is 98 p.c. of the amount of such payments due or accrued for the default period up to a maximum of six months. An additional amount is paid when the default period is more than six months. For settlement costs the claimant receives $125 as compensation for the acquisition fee and other approved legal disbursements.

The entry of the chartered banks and the Quebec savings banks to the field of mortgage lending, under the National Housing Act, means that the potential supply of mortgage funds is substantially broader. Previously, the chartered banks were not permitted to engage in mortgage lending. In addition to providing another channel by which savings can be used for investment in National Housing Act mortgages, the chartered banks, through their 4,000 branches, can provide an improved coverage of potential borrowers under the National Housing Act, particularly in the smaller centres of population.

To facilitate the development of a secondary market in insured mortgage loans, the 1954 Act provides that the insurance policy on a mortgage loan made under the new legislation may be assigned to the purchaser should the loan be sold, provided that the loan continues to be serviced by an approved lender. It will be possible, therefore, for individuals and other investors who are not approved lenders to invest in insured mortgages by arranging with an approved lender to service the loan. The new Act also authorizes the Central Mortgage and Housing Corporation to buy and sell insured mortgage loans as well as to make loans to approved lenders upon the security of insured mortgage loans. These provisions endow the insured mortgage loan with a degree of liquidity and transferability that greatly broadens the potential supply of mortgage funds.

The terms of loans insurable under the new Act differ from the terms on which joint loans were made previously, especially as regards the loan period and the level of loans. For dwellings for home-ownership, other than for certified defence workers, the loan-to-value ratio is now set at 90 p.c. of the first $8,000 of the lending value and 70 p.c. of the remainder, subject to a maximum loan of $12,800 set by regulation. Under the joint loan arrangements, loans were made at 80 p.c. of the lending value up to a maximum of $10,000. For a duplex, the loan is now calculated on the same 90 p.c. and 70 p.c. basis for the first half of the lending value with 80 p.c. allowed on the second half of the lending value subject to a maximum set by regulation at $15,300; previously, loans were made at 80 p.c. of the lending value of the property subject to a maximum loan of $11,600. For dwellings for certified defence workers the ratio of loan amount to lending value is 90 p.c., as under the earlier legislation. For farm dwellings loans may be made for $10,000 or two-thirds of the appraised value of the farm whichever is the lesser amount.

For rental housing projects, insured loans may be made up to 80 p.c. of the lending value of the project and up to a maximum amount of $7,000 per dwelling for multiple family dwellings; under the joint loan arrangement the maximum was $6,200.

The new Act provides for insured mortgage loans for home conversion: such loans must not exceed the lesser of 70 p.c. of the lending value of the structure, including land, when the alteration is completed, or the cost of the alterations together with the amount necessary to discharge all encumbrances on the title to the land.

The usual term of an insured loan for a dwelling for home ownership is now 25 years, compared to 20 years under the old Act. Loans for shorter periods may be approved at the borrower's request. For rental housing projects the term of the loan may not exceed 25 years, and for home conversion the maximum is 15 years.

The maximum rates of interest on loans made under the new Act continue to be set by the Governor General in Council: at the time rates are promulgated they are not to exceed the yields on long-term Government of Canada bonds by more than certain margins. On insured loans, the maximum margin by which the mortgage rate may exceed the bond rate is $2\frac{1}{2}$ p.c. On Mar. 19, 1954, the rate on insured loans for home ownership, home conversion, rental housing projects, and farm housing was set at $5\frac{1}{2}$ p.c.; previously the rate paid by borrowers on these loans, other than those for home conversion, was $5\frac{1}{4}$ p.c.

For all insured loans, Central Mortgage and Housing Corporation passes the plans and specifications, makes appraisals and undertakes the construction inspections to ensure compliance with approved standards.

Under the new Act, as under the earlier legislation, the Central Mortgage and Housing Corporation may make direct loans for house building in areas where mortgage loans, under the Act, are not available from private lenders. These loans are made on the same basis as are those made by approved lenders under the Act.

The provisions of the earlier legislation for direct loans to limited dividend housing corporations and to companies engaged in the primary industries of logging, lumbering, fishing and mining are retained in the new Act. Loans to limited dividend housing corporations are made at low rates of interest for the construction of low and medium rental housing units. By March 1954, 33 companies had been formed under the sponsorship of business companies or local groups; the financing of some of these was supplemented by municipal grants or contributions from service clubs. Many of the dwelling units constructed by these companies are occupied by widows and old-age pensioners.

Section 36 of the National Housing Act, 1954, provides that, following agreements between a provincial government and the Government of Canada, the Central Mortgage and Housing Corporation may undertake, jointly with the province, the development of a housing or land-assembly project. Capital costs, profits and losses of such projects are shared 75 p.c. by the Federal Government and 25 p.c. by the province. The provincial government, in turn, may require the municipality concerned to participate in the provincial share. By March 1954, all provinces, except Prince Edward Island, had passed complementary legislation and projects were under way, or completed, in seven of the nine provinces with enabling legislation.

Under the legislation, three main types of housing agreement have been evolved:—

(1) the construction of houses for rental on an economic or sub-economic basis;

(2) the assembly and servicing of residential lots for sale to builders and prospective home-owners;

(3) combined rental-housing and land-assembly projects where a portion of the land developed is used for housing and the remainder sold.

Completed rental-housing projects are administered by local housing authorities whose members are appointed by provincial Order in Council. Local authorities have been established in 20 municipalities.

By March 1954, 62 projects had been approved, 25 for land assembly only, 10 for combined land assembly and rental housing, and 27 for the erection of rental housing over the whole site. The 37 rental projects relate to 3,036 rental units of which 2,324 had been completed. The land assembly projects involve the servicing of 11,600 lots, of which 1,600 had been completed and sold to builders and prospective home owners.

The Rental Guarantee Plan, instituted in 1948 and re-enacted in the new National Housing Act, is designed to encourage the construction of rental housing accommodation by private builders. Owners of projects built under the Plan are guaranteed a return of rent sufficient to pay taxes, operating expenses, debt service and a minimum return of 2 p.c. on the equity of the owner. From 1948 to March 1954, projects were approved involving 21,550 units having an estimated cost of $167,344,000.

Under the land assembly provisions of the Act, unchanged from the earlier legislation, lending institutions are guaranteed the recovery of their investment and a return of 2 p.c. on land development projects. These projects involve the development of raw land into serviced lots for residential purposes and their sale at prices considerably below the market price for comparable lots. Little activity has taken place under these provisions in recent years. At March 1954, however, seven projects had been started involving 1,950 lots.

The Canadian Farm Loan Act, 1927 (R.S.C. 1952, c. 36, amended by c. 309).—This legislation provides for federal long-term loan assistance for housing, as well as for other farm purposes. (*See* pp. 374-375.)

The Veterans' Land Act, 1942 (R.S.C. 1952, c. 280).—This Act is administered by the Department of Veterans Affairs and provides a form of loan and grant assistance to veterans for housing and other purposes. . (*See* pp. 289-291.)

The Farm Improvement Loans Act, 1944 (R.S.C. 1952, c. 110).—This Act provides for guarantees for intermediate and short-term loans made by approved lending agencies to farmers for housing and other purposes. (*See* pp. 375-376.)

Statistics of Federal Assistance in the Housing Program.—The extent of Federal Government assistance to house building in Canada is shown in Table **18**. The year 1935 marked the passage of the Dominion Housing Act and the entry of the Federal Government into the housing field on a continuing basis. This Act was succeeded by the National Housing Acts of 1938, 1944 and 1954.

A total of 100,663 dwellings were completed in Canada in 1953. Of these, 4,882 were built directly by the Federal Government; 37,517 were built with the aid of federal loans, including joint loans under the National Housing Act; and 806 were built with guarantee assistance by the Federal Government.

18.—Dwellings Completed with and without Federal Government Assistance, 1935-53

(Exclusive of the Yukon and Northwest Territories)

Year	With Federal Government Assistance				Without Federal Government Assistance	Total
	Direct Government	Loans	Guarantees	Total[1]		
	'000	'000	'000	'000	'000	'000
1935	—	0·5	—	0·5	32·4	32·9
1936	—	1·1	0·1	1·2	38·1	39·3
1937	—	1·5	0·9	2·4	46·2	48·6
1938	—	2·4	0·9	3·3	40·7	44·0
1939	—	5·2	1·1	6·3	45·4	51·7
1940	—	6·2	0·8	7·0	45·5	52·5
1941	1·7	4·9	—	6·6	50·2	56·8
1942	7·6	2·7	—	10·3	36·9	47·2
1943	6·4	1·3	0·1	7·8	29·0	36·8
1944	2·8	0·1	—	2·9	39·9	42·8
1945	3·4	2·0	0·2	5·6	42·9	48·5
1946	14·0	5·6	0·4	20·0	47·2	67·2
1947	10·0	10·6	0·4	21·0	58·2	79·2
1948	8·7	13·9	0·5	23·1	58·1	81·2
1949[2]	9·5	23·4	2·7	35·6	55·4	91·0
1950	6·8	32·5	2·5	41·8	50·0	91·8
1951	3·5	29·3	1·5	34·3	50·5	84·8
1952	3·9	22·6	0·9	27·4	48·9	76·3
1953	4·9	37·5	0·8	43·2	57·5	100·7
Totals, 1935-53	**83·2**	**203·3**	**13·8**	**300·3**	**873·0**	**1,173·3**

[1] Exclusive of a small number of dwellings built by Federal Government Departments as part of their normal operations. [2] Newfoundland figures included from 1949.

Details of loans by provinces approved under the National Housing Act for the years 1945-53 are shown in Table **19**.

19.—Net Loans Approved under the National Housing Act, by Province, 1945-53

Year and Item	N'f'ld	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
1945—												
Loans........No.	...	—	60	23	481	2,341	693	96	469	675	—	4,838
Dwellings.... "	...	—	60	23	701	2,480	703	96	485	839	—	5,387
Amount......$'000	...	—	270	101	3,045	10,278	3,034	410	2,099	3,274	—	22,511
1946—												
Loans........No.	...	4	100	84	832	3,254	1,004	215	626	1,222	—	7,341
Dwellings.... "	...	4	113	206	1,931	5,345	1,020	363	880	1,965	—	11,827
Amount......$'000	...	21	532	1,001	8,965	26,168	5,017	1,771	4,028	8,449	—	55,951
1947—												
Loans........No.	...	10	248	102	1,793	3,442	1,188	146	916	1,041	—	8,886
Dwellings.... "	...	37	269	104	3,186	3,676	1,289	149	991	1,232	—	10,933
Amount......$'000	...	170	1,364	562	14,423	19,115	6,577	735	4,960	5,325	—	53,230
1948—												
Loans........No.	...	35	285	286	2,895	6,539	1,106	94	1,972	2,125	2	15,339
Dwellings.... "	...	38	316	308	5,183	6,999	1,372	102	2,156	2,352	2	18,828
Amount......$'000	...	223	1,629	1,871	27,163	42,075	7,576	797	11,504	11,673	13	104,524
1949—												
Loans........No.	21	23	268	194	3,293	8,598	1,469	200	2,595	1,495	3	18,159
Dwellings.... "	21	23	296	225	8,552	9,353	1,569	193	2,837	1,832	3	24,904
Amount......$'000	125	150	1,614	1,297	45,715	56,059	9,402	1,081	15,207	8,835	14	139,499
1950—												
Loans........No.	48	20	504	340	7,994	16,454	1,729	356	3,935	3,059	1	34,440
Dwellings.... "	51	20	558	348	13,980	17,830	1,826	360	4,279	3,503	1	42,756
Amount......$'000	369	140	3,526	2,450	85,686	133,050	13,163	2,255	26,444	22,137	3	289,223

19.—Net Loans Approved under the National Housing Act, by Province, 1945-53—concluded

Year and Item	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
1951—												
Loans........No.	33	7	173	123	2,630	7,700	1,010	135	1,983	1,124	—	14,918
Dwellings.... "	33	7	187	126	4,233	9,416	1,100	137	2,659	1,405	—	19,303
Amount......$'000	239	41	1,210	869	26,035	63,523	6,810	797	16,162	8,011	—	123,697
1952—												
Loans........No.	26	9	227	167	4,092	12,336	1,380	307	3,486	1,688	—	23,718
Dwellings.... "	27	9	260	182	9,117	16,038	1,916	629	4,056	2,089	—	34,323
Amount......$'000	198	64	2,036	1,438	60,538	123,794	13,159	4,533	28,789	14,535	—	249,084
1953—												
Loans........No.	158	15	410	308	4,684	13,097	1,558	633	3,738	1,913	—	26,514
Dwellings.... "	168	16	1,130	333	7,456	18,839	2,050	832	5,464	2,360	—	38,648
Amount......$'000	1,279	124	7,813	2,629	55,459	145,129	14,969	6,231	39,593	17,593	4	290,823

20.—Dwellings Completed with and without Federal Government Assistance, by Province, 1953

(Exclusive of the Yukon and Northwest Territories)

Type of Assistance	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Totals
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
With Federal Government Assistance—[1]											
Direct Federal Government House-Building—											
Department of National Defence..................	—	—	469	—	497	535	332	276	506	232	2,847
Veterans rental projects by Central Mortgage and Housing Corporation.....	36	—	—	—	—	34	—	—	—	433	503
Federal-provincial-municipal projects...............	252	—	161	100	—	894	—	75	—	50	1,532
Totals, Direct Federal Government House-Building..	288	—	630	100	497	1,463	332	351	506	715	4,882
Federal Government Loans—											
National Housing Act.....	36	15	346	301	7,369	17,857	2,223	468	4,821	2,425	35,861
Veterans' Land Act........	38	12	34	44	96	831	49	84	138	268	1,594
Canadian Farm Loan Act..	—	2	2	4	3	8	10	15	11	7	62
Totals, Federal Government Loans....................	74	29	382	349	7,468	18,696	2,282	567	4,970	2,700	37,517
Federal Government Guarantees—											
Rental guarantees under the National Housing Act....	—	—	—	—	42	9	—	—	33	—	84
Farm Improvement Loans Act......................	—	4	4	2	26	98	130	194	228	36	722
Totals, Federal Government Guarantees..............	—	4	4	2	68	107	130	194	261	36	806
Totals, with Federal Government Assistance......	**362**	**33**	**1,016**	**451**	**8,033**	**20,266**	**2,744**	**1,112**	**5,737**	**3,451**	**43,205**
Totals, without Federal Government Assistance..	**1,118**	**149**	**1,467**	**1,087**	**23,049**	**16,238**	**2,050**	**2,943**	**4,325**	**5,032**	**57,458**
Grand Totals..........	**1,480**	**182**	**2,483**	**1,538**	**31,082**	**36,504**	**4,794**	**4,055**	**10,062**	**8,483**	**100,663**

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[1] Exclusive of a small number of dwellings built by Federal Government Departments as part of their normal operations.

Provincial Government Assistance.—As stated previously (*see* p. 742), all provinces except Prince Edward Island had, by March 1954, passed complementary legislation respecting Sect. 36 of the National Housing Act, 1954, which provides for joint federal-provincial housing and land-assembly projects. In addition, separate legislation with respect to housing has been enacted in the Provinces of Quebec and Ontario.

Quebec.—An amendment (S.Q. 1952-53, c. 7) to the "Act to improve housing conditions" (S.Q. 1948, c. 6), assented to Dec. 10, 1952, empowers the Government to pay a subsidy on interest charges in excess of 3 p.c. on new dwellings built between Jan. 15, 1948, and June 1, 1955. Formerly, the Act applied to dwellings completed before Jan. 15, 1953. The amendment also authorizes the expenditure of $40,000,000 for purposes of the Act.

Ontario.—The Housing Development Amendment Act, 1952, empowers the Province and a municipality to enter into joint housing projects and empowers a municipality to contribute to the cost of a housing project or to issue debentures for the purpose of a housing project without reference to its municipal board or the assent of its electors. For industries locating in rural areas and in small communities, the Province and municipality may participate with the Central Mortgage and Housing Corporation in the development of joint housing projects, part of the cost of which will be borne by the Corporation. Under certain conditions, the Province may expropriate land in municipalities for the purpose of housing projects. The Act came into force Apr. 10, 1952, and amended the Housing Development Act (R.S.O. 1950, c. 174).

Under the Planning Amendment Act, 1952, municipalities with an approved official plan may designate an area within the municipality as a redevelopment area and, upon the passage of a by-law, may acquire land within that area and clear and prepare it for residential, commercial, industrial or other designated purpose. The Act came into force May 1, 1952, and amended the Planning Act (R.S.O. 1950, c. 227).

The Rural Housing Assistance Act, 1952, authorizes the establishment of a Crown company—the Rural Housing Finance Corporation—which is empowered to lend and invest mortgage money in order to provide financial assistance in the building of new houses in villages and rural areas. Moreover, the Corporation may lend money independently or in co-operation with the Central Mortgage and Housing Corporation or with any approved lending institution. The Act came into force on Apr. 10, 1952.

The Junior Farmer Establishment Act, 1952, provides for the establishment of a corporation for the purpose of making loans to assist young qualified farmers in the purchase, development and operation of their farms. The corporation may make loans for the erection and improvement of farm houses. A loan may be secured as first-mortgage on farm property and shall not exceed $15,000, repayable in 25 years. The Act came into force on Apr. 10, 1952.

The Elderly Persons Housing Aid Act, 1952, authorizes the Province to make grants to any limited dividend housing corporation approved by a municipality and to which a loan has been made under the National Housing Act. These grants are to assist in the construction and equipment of low-rental housing units for elderly persons. The amount of any grant will be based on the lower of $500 for each dwelling or 50 p.c. of the capital cost of the project to the corporation other than the amount covered by the mortgage loan.

Subsection 4.—Construction of Dwelling Units

The volume of new house building was greater in 1953 than in any previous year. Total housing starts, excluding conversions, numbered 102,409, an increase of 25 p.c. over the 1952 total and 11 p.c. higher than in the earlier peak year of 1950. All regions of the country shared in the increase: in the Atlantic Provinces, housing starts rose 26 p.c. to 5,921 units; in Quebec, 15 p.c. to 30,249 units; in Ontario, 30 p.c. to 38,873 units; in the Prairies, 25 p.c. to 18,776 units; and in British Columbia, 21 p.c. to 8,590 units. The higher number of starts in 1953 was accompanied by an increase in completions, excluding conversions, from 73,087 in 1952 to 96,839 in 1953. At 59,923, the number of dwellings under construction at the end of 1953 was 7·6 p.c. higher than the year before.

Of the dwellings completed in 1953, 82 p.c. were built in urban areas—almost unchanged from the 81 p.c. of 1952. Though there was little change between 1952 and 1953 in the distribution of dwellings by area, there were changes in the distribution by type of dwelling: 20 p.c. of the dwellings completed in 1953 were apartments, compared to 15 p.c. in 1952; single-family dwellings represented 68 p.c. of the total in 1953 compared to 73 p.c. in 1952.

Tables **21**, **22** and **23** summarize the results of surveys conducted by the Dominion Bureau of Statistics and the Central Mortgage and Housing Corporation.

21.—New Dwelling Units Completed, by Type, 1950-53

(Exclusive of the Yukon and Northwest Territories)

Type	1950	1951	1952	1953
	No.	No.	No.	No.
New Construction—				
One-family detached	68,685	60,366	55,967	68,916
Two-family detached	7,376	7,568	5,314	7,714
Row or terrace	145	585	99	372
Apartment or flat	12,540	12,540	11,707	19,837
Other	269	251	—	—
Totals, New Construction	**89,015**	**81,310**	**73,087**	**96,839**
Conversions	**2,739**	**3,500**	**3,215**	**3,824**
Grand Totals	**91,754**	**84,810**	**76,302**	**100,663**

22.—New Dwelling Units Completed, by Province, 1952 and 1953

(Exclusive of Conversions)

Province	1952			1953		
	Urban	Rural	Total	Urban	Rural	Total
	No.	No.	No.	No.	No.	No.
Newfoundland	615	516	1,131	801	679	1,480
Prince Edward Island	42	—	42	62	120	182
Nova Scotia	877	934	1,811	1,638	522	2,160
New Brunswick	690	541	1,231	669	733	1,402
Quebec	17,035	5,372	22,407	25,361	4,442	29,803
Ontario	22,601	4,860	27,461	28,324	6,849	35,173
Manitoba	2,592	550	3,142	3,990	804	4,794
Saskatchewan	2,172	458	2,630	3,337	710	4,047
Alberta	5,538	666	6,204	8,343	1,511	9,854
British Columbia	6,756	272	7,028	7,701	243	7,944
Totals	**58,918**	**14,169**	**73,087**	**80,226**	**16,613**	**96,839**

23.—New Dwelling Units Completed, by Metropolitan Area, 1950-53

(Exclusive of Conversions)

Metropolitan Area	Number				P.C. of Total			
	1950	1951	1952	1953	1950	1951	1952	1953
St. John's, N'f'ld	299	326	402	585	0·3	0·4	0·6	0·6
Halifax, N.S	708	620	636	1,241	0·8	0·8	0·9	1·3
Saint John, N.B	332	98	211	273	0·4	0·1	0·3	0·3
Quebec, Que	1,473	1,045	1,056	1,580	1·7	1·3	1·4	1·6
Montreal, Que	15,826	16,316	11,500	17,833	17·8	20·1	15·7	18·4
Ottawa, Ont	1,938	2,343	1,752	2,149	2·2	2·9	2·4	2·2
Toronto, Ont	9,373	13,026	9,576	9,460	10·5	16·0	13·1	9·8
Hamilton, Ont	1,511	1,757	1,877	2,961	1·7	2·2	2·6	3·0
London, Ont	1,325	1,261	1,358	1,355	1·5	1·5	1·9	1·4
Windsor, Ont	1,196	940	818	940	1·3	1·2	1·1	1·0
Winnipeg, Man	3,070	2,127	2,088	3,089	3·4	2·6	2·9	3·2
Vancouver, B.C	5,028	4,340	4,249	5,913	5·7	5·3	5·8	6·1
Victoria, B.C	1,166	844	715	944	1·3	1·0	1·0	1·0
Totals, Metropolitan Areas	**43,245**	**45,043**	**36,238**	**48,323**	**48·6**	**55·4**	**49·7**	**49·9**
Totals, Canada[1]	**89,015**	**81,310**	**73,087**	**96,839**	**100·0**	**100·0**	**100·0**	**100·0**

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[1] Exclusive of the Yukon and Northwest Territories.

CHAPTER XVII.—SURVEY OF PRODUCTION*

CONSPECTUS

	Page		Page
Section 1. Current Trends of Commodity Production	749	Section 3. Per Capita Net Value of Production	752
Section 2. Industrial Distribution of Production	750	Section 4. Provincial Analysis of Production	753

Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The scope of the Survey of Production is limited to the actual production of commodities. The activities of such industries as transportation, communication, trade, finance and service are excluded except as they are indirectly reflected in the value of output of the commodity-producing industries. This is in contrast to the scope of the widely used Gross National Product series (*see* Chapter XXV), which encompasses all industries. Net production, or "value added" is generally considered more significant as a measure of output than gross value of production, and is, consequently, stressed in the following analyses and tables. It is obtained by deducting from the total or "gross" value of output, the cost of materials, fuel, purchased electricity and supplies consumed in the production process.

The measurement of value added is similar, although not strictly comparable, to the concept involved in the contribution of each industry to gross national product at factor cost (net income originating plus depreciation). Apart from variations in the statistical structure, the main difference is that value added, as computed for each commodity-producing industry, includes the cost of such services as insurance, advertising, transportation, communications, etc. In national income accounting, the contribution of these services to gross national product at factor cost is classified to the non-commodity industries from which they originate.

The value series shown in the tables on p. 752 reflect a major revision in the net value of the construction industry and are thus not comparable with the figures shown in earlier Year Books. A description of this revision together with revised data for previous years is given in the DBS Bulletin *Survey of Production 1948-1952.*

Section 1.—Current Trends of Commodity Production

The net value of Canadian commodity production in 1952 was $13,708,000,000. This represented an increase of nearly 5 p.c. over the revised 1951 figure of $13,075,000,000 and was the highest on record. During 1952, there was an improved relationship between supply and demand and an abatement of inflationary pressures, permitting the lifting of consumer credit regulations and the relaxation of controls over the supply of essential materials, though the outbreak of foot-and-mouth disease and the temporary loss of the United States market set back production values in the farm sector of the economy. Most major price indexes showed declines throughout the year, although the average level of the consumer price index was about 2 p.c. above the average for 1951. Labour income, moreover, rose steadily throughout the year and, on average, was 11 p.c. above 1951. Hence, a notable advance in 'real' wages and salaries was indicated for the year.

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* Prepared in the Business Statistics Section, Research and Development Division, Dominion Bureau of Statistics.

A further increase in net value of commodity production is estimated for 1953. The most important expansionary influence in the economy in 1953 was the continued growth of consumer expenditures, reflecting the large continued rise in 'real' incomes. Important gains over 1952 were shown in the construction sector where the housing component recorded the greatest advance. Value of manufacturing output also showed a considerable gain. By contrast, the agricultural sector recorded a decline in its value of production, largely as a result of reduced grain production and lower prices for a number of agricultural products. Although the 1953 grain crop was one of the largest on record, it was considerably below the record 1952 level. Prices, in general, were also a little lower in 1953 than in the preceding year.

Section 2.—Industrial Distribution of Production

The net value of agricultural production in 1952 was $2,467,000,000, representing a decline of 7 p.c. from the record level of $2,654,000,000 established in 1951. The outbreak of foot-and-mouth disease in Saskatchewan and the decline in live-stock prices prior to and following the United States embargo resulted in greatly reduced value of live-stock production. This decline was only partially offset by the higher value of grain from the record wheat crop of 688,000,000 bushels.

An advance of nearly 10 p.c. in the net value of forestry production was indicated for 1952. The output values of pulpwood, mining timber, firewood and poles showed increases over the preceding year while those for logs and bolts were somewhat less. Although the quantity of pulpwood cut declined slightly, price increases more than offset this. In addition, the value of materials and supplies used by forest operators showed a substantial decline.

The quantity and value of production in the fishing and trapping industries dropped considerably in 1952 as compared with 1951, mainly owing to labour disputes in the fisheries sector.

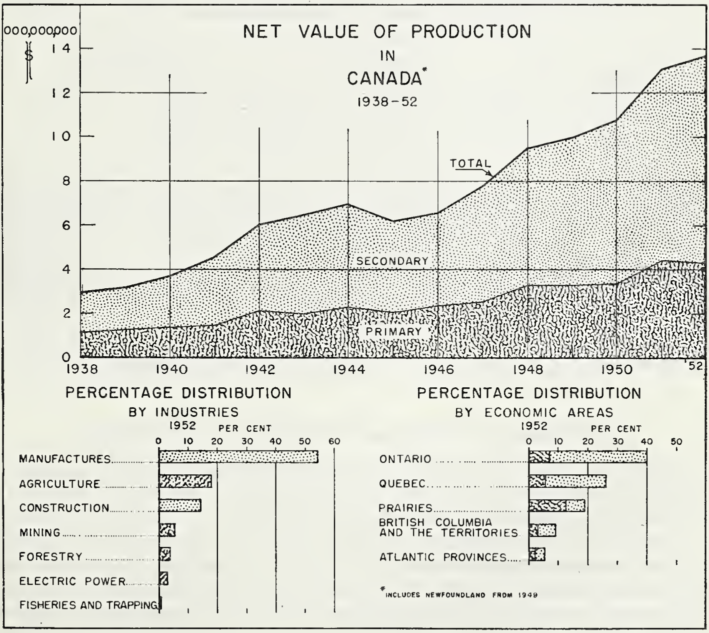
An approximate 1 p.c. advance over 1951 was shown in the net value of the mining industry, largely the result of value increases in the output of petroleum and other non-metallic and structural materials which offset declines in the production of most major metals.

The value of net output in the electric power industry continued to expand and in 1952 was more than 10 p.c. greater than in the preceding year.

The net result of the varying trends outlined above was a decline of more than 2 p.c. in the net value of the primary industries in 1952 as compared with 1951.

The net value of manufacturing activity rose from $6,941,000,000 in 1951 to $7,444,000,000 in 1952, a gain of about 7 p.c. The net value of durable manufactures rose by 10 p.c. and that of non-durable manufactures by 4 p.c. In the durables sector, all major industry groups showed increases, with iron and steel products, transportation equipment and electrical apparatus and supplies accounting for the major increases. In non-durable manufactures, all industry groups except textiles (clothing excluded) and paper products recorded gains. The highest relative increases occurred in petroleum and coal products, tobacco products and leather products.

The net value of work performed in the construction industry rose to $1,977,000,000 in 1952, an advance of nearly 14 p.c. over the preceding year. All types of engineering construction showed gains and accounted for most of the over-all increase. The rise in the value of building construction was considerably less, reflecting a moderate decline in residential building.



1.—Net Value of Production, by Industry, 1948-52

NOTE.—Net production represents total value under a particular heading, less the cost of materials, fuel, purchased electricity and supplies consumed in the production process.

Industry	1948[1]	1949	1950	1951	1952
	$	$	$	$	$
Agriculture	2,045,693,000	2,019,279,000	1,883,036,000	2,653,678,000	2,467,166,000
Forestry	360,908,642	346,455,391	389,500,000	486,293,276	533,937,415
Fisheries	75,374,457	67,457,941	82,191,043	102,026,979	92,892,725
Trapping	20,178,077	15,296,615	15,204,419	19,791,933	14,137,820
Mining	538,762,152	570,215,430	657,328,669	770,143,233	777,443,771
Electric power	248,963,255	270,126,982	313,347,197	363,642,975	402,073,511
Totals, Primary	3,289,879,583	3,288,831,359	3,340,607,328	4,395,576,396	4,287,651,242
Manufactures	4,938,786,981	5,330,566,434	5,942,058,229	6,940,946,783	7,443,533,199
Construction[2]	1,280,000,000	1,371,000,000	1,475,000,000	1,738,274,000	1,976,703,000
Totals, Secondary	6,218,786,981	6,701,566,434	7,417,058,229	8,679,220,783	9,420,236,199
Grand Totals[3]	**9,508,666,564**	**9,990,397,793**	**10,757,665,557**	**13,074,797,179**	**13,707,887,441**

[1] Exclusive of Newfoundland. [2] Revised. *See* DBS *Survey of Production, 1948-1952.* [3] Data for Newfoundland exclude agriculture, fisheries, trapping and fish processing in 1949 and 1950 but include fisheries and fish processing in 1951 and 1952 and trapping in 1952.

2.—Percentage Analyses of the Net Value of Production, by Industry, 1948-52

Industry	Net Value in (1949=100)					Percentage of Total Net Production				
	1948	1949	1950	1951	1952	1948	1949	1950	1951	1952
Agriculture	101·3	100·0	93·3	131·4	122·2	21·5	20·2	17·5	20·3	18·0
Forestry	104·2	100·0	112·4	140·4	154·1	3·8	3·5	3·6	3·7	3·9
Fisheries	111·7	100·0	121·8	151·2	137·7	0·8	0·7	0·8	0·8	0·7
Trapping	131·9	100·0	99·4	129·4	92·4	0·2	0·1	0·2	0·1	0·1
Mining	94·5	100·0	115·3	135·1	136·3	5·7	5·7	6·1	5·9	5·7
Electric power	92·2	100·0	116·0	134·6	148·8	2·6	2·7	2·9	2·8	2·9
Totals, Primary	100·0	100·0	101·6	133·7	130·4	34·6	32·9	31·1	33·6	31·3
Manufactures	92·6	100·0	111·5	130·2	139·6	51·9	53·4	55·2	53·1	54·3
Construction	93·4	100·0	107·6	126·8	144·2	13·5	13·7	13·7	13·3	14·4
Totals, Secondary	92·8	100·0	110·7	129·5	140·6	65·4	67·1	68·9	66·4	68·7
Grand Totals	**95·2**	**100·0**	**107·7**	**130·9**	**137·2**	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

Section 3.—Per Capita Net Value of Production

The rapid advance since the end of the War in the total net value of commodity production was accompanied—1946 to 1952 inclusive—by a 17-p.c. increase in population and a 10 p.c. increase in the labour force.

The national per capita net value of commodity production rose from $535 in 1946 to $965 in 1952 (exclusive of Newfoundland), an increase of 80 p.c. As wholesale prices rose by around 63 p.c. during the same period, a 'real' advance in per capita output is indicated. Compared with 1951, the value of per capita output in 1952 increased by about 2 p.c.

Per capita production in the Maritime Provinces has always been far below the Canadian average, and stood at around one-half the national figure in 1952. Quebec's per capita output has averaged between 10 and 13 p.c. below the Canadian average during the last five years, after having almost reached the national figure during some of the war years. Per capita production in Ontario has consistently been the highest among the provinces, but in 1952 it was very slightly lower than the Saskatchewan figure as the result of the bumper Prairie grain crops in that year. Ontario's per capita figure, at $1,146, was still nearly 19 p.c. above the national average.

Manitoba's per capita production in the post-war period has been well below the Canada average and in 1952 stood at $728 or 25 p.c. under the average. The figure for Saskatchewan has fluctuated widely according to crop conditions, sometimes dropping far below the national average, sometimes exceeding it, as in 1952 when, at $1,148 it was the highest of any province. During the 1948-52 period, per capita output in Alberta has been consistently above the all-Canada figure and stood at its highest relative level in 1952, 13 p.c. above the national average. The well-diversified economy of British Columbia usually ranks high in per capita production, being surpassed only by Ontario. During 1951 and 1952, however, owing mainly to the increased value of Prairie farm output, it dropped to fourth place behind Saskatchewan and Alberta.

3.—Per Capita Net Value of Production with Percentage Variation from the National Average, by Province, 1948-52

Province	1948		1949		1950		1951		1952	
	Per Capita Net Value	P.C. Variation	Per Capita Net Value	P.C. Variation	Per Capita Net Value	P.C. Variation	Per Capita Net Value	P.C. Variation	Per Capita Net Value	P.C. Variation
	$		$		$		$		$	
Prince Edward Island	307	−58·6	327	−56·7	321	−59·8	372	−60·8	405	−58·0
Nova Scotia	399	−46·2	419	−44·6	407	−49·0	462	−51·3	483	−49·9
New Brunswick	431	−41·9	423	−44·0	473	−40·7	520	−45·1	506	−47·6
Quebec	648	−12·7	661	−12·6	710	−11·0	823	−13·2	863	−10·6
Ontario	884	+19·1	932	+23·3	1,014	+27·1	1,148	+21·1	1,146	+18·8
Manitoba	670	− 9·7	637	−15·7	630	−21·1	734	−22·6	728	−24·6
Saskatchewan	759	+ 2·3	770	+ 1·9	657	−17·7	1,071	+13·0	1,148	+19·0
Alberta	838	+12·9	826	+ 9·3	804	+ 0·8	1,068	+12·6	1,094	+13·4
British Columbia[1]	842	+13·5	789	+ 4·4	872	+ 9·3	1,057	+11·5	1,029	+ 6·6
Totals[2]	**742**	...	**756**	...	**798**	...	**948**	...	**965**	...

[1] Includes the Yukon and the Northwest Territories. [2] Excludes Newfoundland.

Section 4.—Provincial Analysis of Production

Newfoundland.—In 1952, the net value of commodity production in Newfoundland accounted for a little more than 1 p.c. of the Canadian total. The principal industry in the Province is manufacturing, consisting, in the main, of pulp and paper production and fish processing. Construction ranks next in importance, followed by mining and forestry. The principal mineral products are iron ore, lead and zinc. Primary fisheries represented about 8 p.c. of the value of commodity output in 1952. Exclusive of agriculture, the total value of output rose by about 10 p.c. over 1951.

Prince Edward Island.—Table 6 shows that Prince Edward Island's economy is mainly agricultural. In 1952, the industry represented about 60 p.c. of the Province's value of production. Principal farm products are potatoes, livestock and dairy products. Construction and manufactures account for the bulk of non-agricultural output.

Nova Scotia.—The net value of commodity output in Nova Scotia rose by more than 6 p.c. from 1951 to 1952, and represented a little more than 2 p.c. of total Canadian production. In the latter year, manufacturing accounted for more than 41 p.c. of the Province's value of production. Primary iron and steel, fish processing, pulp and paper, sawmills, railway rolling-stock and shipbuilding are the leading manufacturing industries. Construction in 1952 accounted for 17 p.c. of the provincial output. Mining and agriculture are Nova Scotia's main primary industries with the fishing industry ranking next in importance. In recent years, coal mining has contributed about 80 p.c. of the value of mineral output. Live stock, poultry and dairy products are the principal farm commodities.

New Brunswick.—The net value of production in New Brunswick declined slightly in 1952 as compared with the preceding year, and accounted for about 2 p.c. of the value of output of all provinces. As in Nova Scotia, manufacturing is the principal activity, representing more than 44 p.c. of the Province's value of production in 1952. The main manufacturing industry is pulp and paper, followed by sawmilling and fish processing. Among the primary industries, agriculture and forestry are the most important. The main farm products are potatoes, live stock, poultry and dairy products. The net value of construction work performed accounted for 15 p.c. of provincial output in 1952.

Quebec.—Quebec's value of production at $3,604,000,000 accounted for about 26 p.c. of Canadian commodity output in 1952 and showed an advance of 8 p.c. over the preceding year. Manufacturing is by far the most important industry, representing more than 60 p.c. of provincial output. Pulp and paper is the leading manufacturing industry, followed by metal smelting and refining, textiles and clothing. Agriculture accounted for nearly 9 p.c. of the industrial composite, livestock, poultry and dairy products providing the greatest income. The value of construction represented more than 14 p.c. of provincial output, and showed a marked increase over 1951. All industries except agriculture and trapping recorded value gains in 1952.

Ontario.—The value of net commodity production in Ontario in 1952 amounted to $5,462,000,000, representing an increase of more than 3 p.c. over the preceding year, and accounting for 40 p.c. of total Canadian commodity output. The economy of the Province, like that of Quebec, is dominated largely by manufacturing which accounted for 70 p.c. of provincial output in 1952. Those manufacturing industries which contributed more than $100,000,000 to net output in 1952 are, in order of importance: motor-vehicles, primary iron and steel, pulp and paper, metal smelting and refining, heavy electrical machinery, rubber goods and motor-vehicle parts. Agriculture represented nearly 10 p.c. of the provincial value composite and consisted mostly of vegetables, live stock, poultry and dairy products. The value of construction work performed accounted for more than 12 p.c. of the Province's production, about the same proportion as in 1951. As in Quebec, only agriculture and trapping showed value declines in 1952 compared with the preceding year.

Manitoba.—In 1952, Manitoba's production rose only about 2 p.c. over the preceding year, largely reflecting a decline of about 9 p.c. in the value of agricultural output. In the year under review, the net value of the Province's production accounted for a little more than 4 p.c. of the Canadian total. Agriculture and manufacturing provided nearly equal shares of around 38 p.c. of the provincial value composite. In the manufacturing sector, slaughtering and meat packing and railway rolling-stock are the leading industries. As in the other Prairie Provinces, grain and live stock are the principal agricultural products. The value of construction in Manitoba in 1952 rose appreciably compared with 1951 and accounted for nearly 17 p.c. of the Province's total output. Principally owing to reduced output of copper and gold, the value of mineral production dropped sharply in 1952 to its lowest level in five years.

Saskatchewan.—The economy of the Province is overwhelmingly dependent on agricultural production which, in 1952, represented 77 p.c. of total net value of commodity output. Total provincial production accounted for 7 p.c. of the national composite in the same year. By contrast to most other provinces, the value of agricultural output showed an advance of more than 6 p.c. over 1951; the increase in value of grains more than offset declines in live-stock production. Manufacturing output, consisting mostly of petroleum products, flour mills, meat packing, breweries and butter and cheese, recorded a sharp gain compared with the preceding year. A similar increase was shown in the value of construction.

Alberta.—In 1952, Alberta's commodity output represented nearly 8 p.c. of the national total and was 6 p.c. greater than in 1951. Owing mainly to the rapid advance in the value of mineral production, agriculture has progressively diminished in importance, and in 1952 accounted for about 46 p.c. of provincial output. The net value of the mining industry increased sharply since 1948, reflecting the rapid development of Alberta's mineral resources and in 1952 represented 16 p.c. of provincial production as compared with 11 p.c. in 1948. Manufacturing is another important industry, accounting for nearly 17 p.c. of Alberta's value of output. Meat packing, petroleum products, sawmills and breweries are the leading manufacturing industries. The value of construction represented over 18 p.c. of provincial net output in 1952. Only agriculture and trapping failed to show an increase in value in 1952 as compared with the preceding year.

British Columbia.—The value of output in British Columbia in 1952 showed a fractional decrease from 1951 but accounted for 9 p.c. of the total value of Canadian production. It was the third-ranking province in net value of output after Ontario and Quebec. In 1952, the value of agriculture, fisheries, trapping, mining and manufacturing showed declines from 1951. These were offset by increases in the value of electric power and construction. The forestry industry recorded little change. Manufacturing is the leading industry in the Province, representing 45 p.c. of provincial output. The principal manufacturing industries from the point of view of net value are sawmills, pulp and paper, fish processing, veneers and plywoods, and fertilizers. The construction industry accounted for 22 p.c. of British Columbia's value of output in 1952 after showing a gain of 27 p.c. over 1951. Forestry represented 13 p.c. of the provincial total and mining more than 9 p.c.

4.—Net Value of Production, by Province, 1948-52

Province or Territory	1948	1949	1950	1951	1952
	$	$	$	$	$
Newfoundland[1]	...	79,682,122	97,238,222	136,110,998	150,017,395
Prince Edward Island	28,544,059	30,740,835	30,819,330	36,505,157	41,696,971
Nova Scotia	249,547,233	263,590,743	259,731,738	296,791,447	315,598,397
New Brunswick	214,794,853	214,942,563	242,111,904	268,285,055	266,208,879
Quebec	2,455,408,144	2,567,996,801	2,816,309,229	3,337,598,876	3,603,837,567
Ontario	3,777,362,166	4,082,002,159	4,534,265,812	5,277,350,439	5,462,414,735
Manitoba	499,940,080	481,862,653	483,805,980	569,952,272	580,632,738
Saskatchewan	636,134,284	641,086,461	546,960,335	891,151,432	967,630,499
Alberta	715,842,516	731,033,750	734,148,363	1,002,712,967	1,060,842,944
British Columbia[2]	921,500,886	884,820,749	995,233,672	1,240,224,661	1,239,598,201
Yukon and Northwest Territories[2]	9,592,343	12,638,957	17,040,972	18,113,875	19,409,115
Canada	**9,508,666,564**	**9,990,397,793**	**10,757,665,557**	**13,074,797,179**	**13,707,887,441**

[1] Newfoundland data exclude agriculture, fisheries, trapping and fish processing in 1949 and 1950, but includes fisheries and fish processing in 1951 and 1952 and trapping in 1952. [2] Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

5.—Percentages of Total Net Production, by Province, 1948-52

Province	1948	1949	1950	1951	1952
	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland[1]	...	0·8	0·9	1·0	1·1
Prince Edward Island	0·3	0·3	0·3	0·3	0·3
Nova Scotia	2·6	2·6	2·4	2·3	2·3
New Brunswick	2·3	2·2	2·2	2·0	1·9
Quebec	25·8	25·7	26·2	25·5	26·3
Ontario	39·7	40·9	42·1	40·4	39·9
Manitoba	5·3	4·8	4·5	4·4	4·2
Saskatchewan	6·7	6·4	5·1	6·8	7·1
Alberta	7·5	7·3	6·8	7·7	7·7
British Columbia[2]	9·7	8·9	9·3	9·5	9·1
Yukon and Northwest Territories[2]	0·1	0·1	0·2	0·1	0·1
Totals	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**

[1] Newfoundland data exclude agriculture, fisheries, trapping and fish processing in 1949 and 1950, but include fisheries and fish processing in 1951 and 1952 and trapping in 1952. [2] Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

6.—Net Value of Production and Percentage Analysis, by Province, 1952

Industry	Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Agriculture	..	...	24,877	59·7	31,599	10·0	45,902	17·2
Forestry	20,424	...	750	1·8	12,707	4·0	37,491	14·1
Fisheries	13,000	...	2,660	6·4	22,753	7·2	7,825	2·9
Trapping	141	...	3	- -	420	0·2	131	0·1
Mining	20,515	...	—	—	49,599	15·7	7,630	2·9
Electric power	3,390	...	1,055	2·5	12,863	4·1	8,832	3·3
Manufactures	56,109	...	5,957	14·3	130,715	41·4	117,837	44·3
Construction	36,438	...	6,395	15·3	54,942	17·4	40,561	15·2
Totals	**150,017**	...	**41,697**	**100·0**	**315,598**	**100·0**	**266,209**	**100·0**

Industry	Quebec		Ontario		Manitoba		Saskatchewan	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Agriculture	317,806	8·8	529,160	9·7	220,975	38·0	748,977	77·4
Forestry	167,459	4·7	108,744	2·0	8,514	1·5	4,698	0·5
Fisheries	3,572	0·1	7,417	0·1	3,439	0·6	679	0·1
Trapping	1,341	- -	3,657	0·1	2,526	0·4	1,720	0·2
Mining	174,105	4·8	182,085	3·3	12,082	2·1	29,732	3·0
Electric power	140,816	3·9	140,762	2·6	19,787	3·4	12,812	1·3
Manufactures	2,288,643	63·5	3,811,107	69·8	216,814	37·4	80,934	8·4
Construction	510,095	14·2	679,483	12·4	96,496	16·6	88,078	9·1
Totals	**3,603,837**	**100·0**	**5,462,415**	**100·0**	**580,633**	**100·0**	**967,630**	**100·0**

Industry	Alberta		British Columbia[1]		Yukon and Northwest Territories[1]		Canada	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Agriculture	483,108	45·5	64,762	5·2	—	—	2,467,166	18·0
Forestry	10,831	1·0	162,318	13·1	—	—	533,937	3·9
Fisheries	654	0·1	30,158	2·4	735	...	92,893	0·7
Trapping	1,766	0·2	813	0·1	1,621	...	14,138	0·1
Mining	171,119	16·1	115,524	9·3	15,053	...	777,444	5·7
Electric power	19,522	1·9	41,258	3·4	977	...	402,073	2·9
Manufactures	178,221	16·8	556,172	44·8	1,023	...	7,443,533	54·3
Construction	195,622	18·4	268,593	21·7	—	—	1,976,703	14·4
Totals	**1,060,843**	**100·0**	**1,239,598**	**100·0**	**19,409**	...	**13,707,887**	**100·0**

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[1] Forestry and construction figures for the Yukon and Northwest Territories are included with British Columbia.

CHAPTER XVIII.—LABOUR*

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—The Government in Relation to Labour

Subsection 1.—Federal Labour Legislation

The Federal Department of Labour was established in 1900 under the Conciliation Act which provided machinery to aid in preventing and settling labour disputes and required the Department to collect, compile and publish statistical and other relevant information. The Department assumed, too, the administration of the Fair Wages Policy adopted in the same year for the protection of workmen employed in the execution of Federal Government contracts and on works aided by grants from public funds.

At present, in addition to the statutory duty of disseminating information concerning labour and industrial matters, the Minister of Labour is responsible for the administration of the following statutes: Conciliation and Labour Act, 1906; Government Annuities Act, 1908; Fair Wages and Hours of Labour Act, 1935; Unemployment Insurance Act, 1940; Vocational Training Co-ordination Act, 1942; Reinstatement in Civil Employment Act, 1946; Merchant Seamen Compensation Act, 1946; Government Employees Compensation Act, 1947; Industrial Relations and Disputes Investigation Act, 1948; and Canada Fair Employment Practices Act, 1953. Except for the Conciliation and Labour Act, and the Canada Fair Employment Practices Act, the above Acts are incorporated in the Revised Statutes of Canada 1952. (*See also* pp. 105-109.)

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* Except as otherwise noted, this Chapter has been revised under the direction of A. H. Brown, Deputy Minister, Department of Labour, Ottawa.

Fair Wages Policy.—The Fair Wages Policy applying to all Federal Government contracts was first set forth in a Resolution of the House of Commons (1900) and later incorporated in an Order in Council and amended from time to time. Wages and hours on contracts for construction are now regulated by the Fair Wages and Hours of Labour Act and Order in Council P.C. 5547 of Nov. 3, 1949, as amended. Hours of work on construction contracts are limited to eight per day and 44 per week, except in an emergency or in exceptional circumstances where exemption is granted by Order in Council; wages to be paid are those current for the type of work in the district, or if there are no current rates, fair and reasonable rates as determined by the Minister of Labour.

Wages and hours of work on contracts for equipment and supplies are regulated by Order in Council P.C. 5547. The hours of such work must be those fixed by the custom of the trade in the district where the work is performed, or fair and reasonable hours. The wages must be current or fair and reasonable, but in no event shall they be less than those established by statute or regulation of the Province in which the work is being performed.

On Sept. 24, 1952, the Order in Council referred to above was amended to provide that all types of contract to which the Order applies, entered into on and after Jan. 1, 1953, shall contain a clause prohibiting discrimination against any person in matters of employment because of that person's race, national origin, colour, or religion, or because he has made a complaint or given information with respect to such alleged discrimination.

The Industrial Relations and Disputes Investigation Act.—This legislation came into effect by proclamation on Sept. 1, 1948, revoking the Wartime Labour Relations Regulations, P.C. 1003, in effect since March 1944, and repealing the Industrial Disputes Investigation Act which had been in force from 1907 until suspended by the Wartime Regulations in 1944. The Act protects proceedings commenced, and decisions, orders and certifications made under the wartime legislation in so far as these involve services authorized by the Act.

The Act applies only to industries within federal jurisdiction, viz., navigation, shipping, interprovincial railways, canals, telegraphs, steamship lines and ferries both international and interprovincial, aerodromes and air transportation, radio broadcasting stations, and works declared by Parliament to be for the general advantage of Canada or of two or more provinces. However, the Act provides that provincial authorities, if they so desire, may enact similar legislation for application to employees within provincial jurisdiction and make mutually satisfactory arrangements with the Federal Government for the administration of such legislation by the federal authorities.

In general, the Act in its important features provides that employees and employers shall have the right to organize and bargain collectively, that trade unions may be certified as bargaining agents for groups of employees. Trade unions and employers are required, upon notice, to bargain collectively in good faith. The Act provides for invoking collective bargaining negotiations and for the mediation of conciliation officers and conciliation boards in reaching collective agreements. Employees may change bargaining agents at times under conditions specified in the Act which also prescribes conditions affecting the duration and renewal of collective agreements. Collective agreements are required to contain provision for the arbitration of disputes concerning the meaning or violation of such agreements and where such provision is lacking application may be made for its establishment. The Act prohibits unfair labour practices, i.e., the interference with or domination of trade unions by employers or interference, discrimination and coercion in trade-union activity. The conditions which must be observed prior to strike and lockout action are provided for in the Act. Industrial inquiry commissions may be appointed to investigate industrial matters or disputes.

The Minister of Labour is charged with the administration of the Act and is directly responsible for the provisions affecting the appointment of conciliation officers, conciliation boards, industrial inquiry commissions, consent to prosecute, and complaints that the Act has been violated or that a party has failed to bargain in good faith.

The Canada Labour Relations Board administers provisions concerning the certification of bargaining agents, the writing of a procedure into a collective agreement for the final settlement of disputes concerning the meaning or violation of such agreement, and the investigation of complaints made to the Minister that a party has failed to bargain collectively.

Detailed statistics concerning activities under the Act may be found in the Annual Report of the Department of Labour. In brief, the Canada Labour Relations Board has received 469 applications for certification since Sept. 1, 1948, 283 of which have been granted, 105 rejected, 69 withdrawn and 12 were pending at Mar. 31, 1954.

Of the 249 industrial disputes dealt with under the conciliation provisions of the Act, 202 were settled by conciliation officers and conciliation boards, 22 were not settled, 9 lapsed and 16 were pending at Mar. 31, 1954.

Canada Fair Employment Practices Act.—This Act, which came into effect on July 1, 1953, prohibits discrimination in employment based on race, colour, religion or national origin, whether practiced by employers or trade unions. It applies only to industries within federal jurisdiction—those covered by the Industrial Relations and Disputes Investigation Act (*see* p. 759).

This law prohibits acts of discrimination by employers; discrimination by trade unions in regard to membership or employment; the use by employers of employment agencies which practise discrimination, and of advertisements or inquiries in connection with employment which express, directly or indirectly, any limitation, specification or preference as to race, colour, religion or national origin.

Subsection 2.—Provincial Labour Legislation

Labour legislation in Canada is mainly a matter for the provincial legislatures and usually deals with the contract of service between employer and employee, the contract between members of a trade union which forms the basis of the union, or regulates conditions in local work-places. The right to contract is a civil right and the British North America Act, which distributes legislative powers between the Parliament of Canada and the provincial legislatures, grants to the provinces power to enact laws in relation to "civil rights" and, with certain exceptions, "local works and undertakings."

In each province, except Prince Edward Island, a Department of Labour (in Alberta, the Department of Industries and Labour) is charged with the administration of labour laws. Legislation for the protection of miners is administered by departments dealing with mines.

Factory legislation and shops legislation in several of the provinces prohibit child labour, regulate the hours of women and young persons, and provide for safety and health. Most provinces have minimum-wage legislation and maximum-hours laws, and legislation to ensure freedom of association, to promote collective bargaining and to provide for the settlement of industrial disputes, and to provide for apprenticeship and the licensing of certain classes of workmen. The Industrial Standards Act in Nova Scotia, New Brunswick, Ontario and Saskatchewan, the Alberta Labour Act and the Fair Wage Act in Manitoba enable the wages and hours of work agreed upon at a conference of representatives of employers and employees in designated trades to be made the minimum standards throughout the trade concerned. The Quebec Collective Agreement Act permits collective agreements between employers and trade unions to be made binding on all in the industry. Workmen's compensation laws, in all provinces, are administered by independent boards.

Provincial labour legislation enacted in 1953 and 1954 is outlined in the following paragraphs.

Newfoundland.—In 1953, the *St. John's Shops Act* was amended to require shops to be closed one full day each week besides Sunday, and to limit hours of shop employees to 44 a week.

The *Apprenticeship Act* was amended in 1954 to ensure that no person between the ages of 16 and 21, eligible for apprenticeship, is employed in a designated trade for more than three months except under a contract of apprenticeship. Exceptions may be allowed by Provincial Apprenticeship Board permit.

Prince Edward Island.—The *Trade Union Act* was amended in 1953 to include a procedure for certifying a bargaining agent and for a government-supervised strike vote. If the employees of a public utility vote in favour of a strike, the dispute is to be referred to a special commission, composed of the members of the Public Utilities Commission and two other persons appointed for each dispute. The Commission's decision is binding.

Nova Scotia.—In 1953, a provision was added to the *Nova Scotia Teachers' Union Act* to authorize collective bargaining between the Teachers' Union and school boards. A conciliation board may be established if the parties are unable to reach agreement on salaries or other conditions of employment.

The *Workmen's Compensation Act* was amended in 1953 to reduce the waiting period from seven to five days. If a workman is disabled for five days or longer, compensation is payable from the date of the accident. In the event of death, the benefits to dependants are increased. The monthly payment for a child under 16 years is raised from $15 to $20, and of an orphan child from $25 to $30. The minimum compensation to a workman who suffers total disability is increased from $12.50 to $15 a week, subject to the provision that if his total weekly earnings are less than $15, he will receive the amount of his earnings.

Under a 1954 consolidation of the Act, coverage is extended to the following industries, effective Jan. 1, 1955: hotels, restaurants, catering, dairies, wholesale and retail stores, broadcasting stations, artificial ice production, peat processing, landscaping and operation of bridges.

An amendment to the *Coal Mines Regulation Act,* in 1954, raises the minimum age for employment underground in coal mines from 17 to 18 years.

New Brunswick.—The *Fair Wages and Hours of Labour Act* passed in 1953 requires a contractor engaged in construction work for the provincial government to pay his employees "fair wages", that is the current rate paid to other workmen performing the same class of work in the district, and to limit hours of work to eight in a day and 44 in a week unless longer hours are authorized.

A new *Vacation Pay Act* passed in 1954 applying to mining and the construction industry requires an annual vacation of at least one week with pay after a year's employment. A system of vacation-with-pay credit stamps is provided for employees who do not work a full year for the same employer. The vacation pay to be granted is 2 p.c. of the employee's earnings. The Act will come into force on proclamation.

The *Weekly Rest Act*, effective from Aug. 1, 1954, requires a weekly rest period of at least 24 hours, and covers practically all employees in the Province except farm workers.

The application of the *Stationary Engineers' Act* is extended to hot-water boilers and provision made for a fourth-class engineer's certificate.

Quebec.—Further measures were passed by the Quebec Legislature in 1953 to exempt the decisions of the Labour Relations Board and of councils of arbitration under labour Acts from supervision by the courts.

In 1954, the *Labour Relations Act* was amended, retroactive to the date the Act went into effect in 1944, to require the Labour Relations Board to decertify or refuse to certify a union if any of its organizers or officers belong to the communist party or movement.

A 1954 amendment to the *Public Service Employees Disputes Act*, also retroactive to 1944, provides that if a union of employees of a school corporation, a hospital or charitable institution or a public utility service goes on strike it will automatically lose its certification as bargaining agent.

Ontario.—In 1953, amendments to the *Workmen's Compensation Act* provide increased monthly allowances to dependants of a deceased workman; for a widow the allowance is raised from $50 to $75 and for a child under 16 years of age from $12 to $25. The monthly allowance for an orphan child is increased from $20 to $35.

The *Elevators and Lifts Act, 1953*, proclaimed June 17, 1954, and regulations under it, establish a system of provincial supervision over the licensing and inspection of most elevators in the Province except passenger elevators in the city of Toronto. Plans and specifications for new elevators must be approved, annual inspections are required, and operators must be licensed.

In 1954, amendments to the *Labour Relations Act* aimed at reducing delays, shorten the periods allowed under the Act for the various steps in collective bargaining and conciliation and give the Minister authority to refuse to appoint a conciliation board where, in his view, it would serve no useful purpose. To facilitate bargaining between employers and groups of trade unions, one amendment provides for the recognition of councils of trade unions as bargaining agents under the Act.

The *Trench Excavators Protection Act, 1954*, is a new Act designed to protect workers from dangers in trench excavation. An inspector of trench excavation work is to be appointed by each municipal council. The Act requires that before work is begun on a trench which is more than four feet deep, the owner or contractor must notify the inspector who is required to ensure that the provisions of the Act are complied with.

Manitoba.—The *Fair Employment Practices Act, 1953*, prohibits discrimination by an employer in regard to employment, or by a trade union in regard to membership, on grounds of race, national origin, colour or religion. The Act applies generally in the Province to employers of five or more persons, but non-profit educational, social, religious or charitable organizations and domestic servants employed in private homes are excluded. An advertisement in connection with employment may not contain any specification as to race, national origin, colour or religion. A complaint of discrimination may be filed by the aggrieved person with a designated officer in the Department of Labour, and the complaint will be investigated; the Minister has authority to appoint an industrial inquiry commission to recommend any action necessary and to make the action effective. A 10-day period is provided for, wherein the Minister's order may be appealed to the Court of Queen's Bench.

Amendments to the *Workmen's Compensation Act* provide that compensation for disability is to be computed on the basis of 70 p.c. of average earnings instead of 66⅔ p.c. The burial allowance is increased from $150 to $200; the monthly allowance for a dependant child from $12 to $20 and for an orphan child from $20 to $30. Widows receiving compensation according to earlier scales of benefit will be brought up to the current level of $50 a month. The minimum compensation payable to a dependent widow and one child is raised from $12.50 a week to $70 a month, and to a widow and two or more children, from $15 a week to $90 a month.

The *Hours and Conditions of Work Act* was made to apply to the northern mining communities of Snow Lake and Lynn Lake; hours of work are limited to eight a day and 48 a week for men (44 a week for women) unless paid at time and one-half the regular rate.

The *Fire Departments Arbitration Act* passed in 1954 provides for arbitration of disputes between a municipality and its firefighters. It applies only where the union representing the firefighters does not have the right under its constitution to call a strike. The award of an arbitration board is binding on both parties, and strikes and lockouts are prohibited.

Saskatchewan.—In 1953, amendments to the *Workmen's Compensation* (*Accident Fund*) *Act* increased the funeral allowance from $175 to $250.

An amendment to the *City Act* relating to disputes involving members of the police force provides for submission of a dispute to a board of arbitration authorized to make an award binding on both parties—but only where the constitution of the policemen's union contains an undertaking not to go on strike. The *Fire Departments Platoon Act* was amended to make similar provisions for the settlement by arbitration of disputes involving full-time firefighters.

The *Gas Inspection and Licensing Act*, effective Jan. 1, 1954, requires a person who installs gas equipment or works as a gasfitter to hold a licence under the Act.

In 1954, locomotive engineers and maintenance-of-way employees of the railroads, formerly covered by an individual liability statute, elected to come under the *Workmen's Compensation* (*Accident Fund*) *Act*.

The *Trade Union Act* was amended to protect the pension rights of an employee whose service is broken by a lockout or by a legal strike.

An amendment to the *Hours of Work Act* provides that, for overtime worked in any week in which a paid holiday occurs, time and one-half becomes payable after 36 hours instead of after 44 hours as in an ordinary week.

Under the *Factories Act*, the limits set for special overtime work by women and young persons under 18 years of age were reduced from 12½ to 10 hours a day and from 72½ to 60 hours a week. Normal working hours of women and young persons are limited to 48 in a week.

Alberta.—New provisions added to the *Fire Departments Platoon Act* concerning collective bargaining and arbitration of disputes became effective July 1, 1953. When requested in writing by a majority of the full-time firefighters, a municipal council is required to bargain in good faith with a committee representing the firemen to determine wages, pensions and other working conditions. If an agreement cannot be reached, the points at issue are to be referred to an arbitration board whose decision is binding. Provisions of an agreement or award involving expenditures may only become effective at the beginning of the fiscal period in which provision for such expenditures is made in the municipal estimates.

A consolidation of the *Police Act* effective July 1, 1953, made provision for bargaining and for arbitration of disputes for full-time members of a municipal police force similar to those described above for firemen. Policemen may not belong to a trade union, but may have their own association for bargaining purposes.

In 1954, Part V of the *Alberta Labour Act*, which deals with collective bargaining and the settlement of disputes in industry generally, was amended in a number of details.

British Columbia.—Effective Dec. 31, 1953, the *Equal Pay Act* forbids an employer to pay a female employee at a lower rate than a male employee for the same work done in the same establishment. A woman who considers that she is not being paid at the rate required by the Act may file a complaint with the Board of Industrial Relations.

The *Labour Relations Act*, proclaimed in force on June 16, 1954, replaced the Industrial Conciliation and Arbitration Act.

One of the chief differences between the present and the previous legislation is that the Minister of Labour now has the authority, formerly vested in the Labour Relations Board, to appoint conciliation officers, conciliation boards and mediation committees.

A further new provision permits the conciliation officer's recommendations to be accepted in place of a report of a conciliation board in certain cases. The parties are required, within 18 days, to advise the Minister of their acceptance or rejection of the conciliation officer's recommendation or the conciliation board's report.

The Section giving authority to the Labour Relations Board to decertify a union representing employees who had gone on strike contrary to the Act was replaced by a provision permitting the reference of the strike to a Judge of the Supreme Court. He has the power to revoke the union's certification, check-off arrangement and the collective agreement to which it is a party if he finds the strike was illegal. Before making his adjudication, the Judge may hold a hearing at which the employer and the employees may be represented and procure the attendance of witnesses.

Amendments to the *Workmen's Compensation Act* provide that compensation for disability is to be computed on the basis of 75 p.c. of average earnings instead of 70 p.c. The maximum annual earnings on which compensation is based are increased from $3,600 to $4,000 a year. A number of new groups are brought under the Act including members of municipal fire brigades, domestic servants (on an optional basis), and independent operators and their dependants (on an elective basis).

Amendments made to the *Public Works Fair Wages and Conditions of Employment Act*, passed in 1951, require that all persons employed in the execution of a contract with the provincial government must be paid "fair wages" and must not work longer than eight hours a day and 44 hours a week. If a contractor fails to pay the proper wages, an employee may make a claim to the Minister of Labour rather than, as formerly, to the Minister of the contracting department.

Regulation of Wages and Hours of Labour under Industrial Standards Legislation and the Quebec Agreement Act.—The Industrial Standards Acts of Nova Scotia, New Brunswick, Ontario, and Saskatchewan, and the Alberta Labour Act provide that wages and hours agreed upon at a conference of representatives of employers and employees, called by the Minister of Labour or his representative, may, by Order in Council, be made legally binding on the industry in the area concerned. The Nova Scotia Act applies only to construction work at Halifax, Dartmouth, and Sydney.

In *Nova Scotia*, 12 schedules of hours and wages for individual building trades were in force in 1953: 11 renewals of previous schedules and one new schedule governing plumbers rates at Sydney. In *New Brunswick*, five schedules for individual building trades were in force in 1953. One schedule governing painters at Saint John expired in December 1952.

In *Quebec*, under the *Collective Agreement Act*, hours and wages and also apprenticeship, vacations with pay and family allowances provisions established by a collective agreement voluntarily entered into by employers and unions or groups of employees may be made legally binding by Order in Council on all employers and employees in the industry in the district covered by the Agreement, if the parties are sufficiently representative of the industry. At Mar. 31, 1953, 102 agreements, covering 220,549 workers and 21,392 employers, had been generalized to apply either throughout the Province or to a certain district. The agreements in force throughout the Province apply to the following industries: building materials, the manufacture of women's cloaks and suits, dresses, millinery, the manufacture of men's and boys' clothing, men's and boys' hats and caps, men's and boys' shirts, ladies handbags, fine gloves and work gloves, shoes, furniture, paint, corrugated and uncorrugated paper boxes, the tanning industry, elevator construction, and the structural-iron erection industry. Other agreements concern industries in particular cities or parts of the Province including all building trades and printing trades in large urban centres and many rural districts.

In *Ontario*, there were 145 wages and hours schedules in force at Mar. 31, 1953, affecting brewery workers, cloakmakers, the men's and boys' clothing industry, men's and boys' hats and caps, the hard furniture industry, and millinery workers.

In the construction industry, one schedule covered several building trades in one city and 65 schedules, each for a single trade in a single locality, covered one or more trades in 28 localities. In other industries also, schedules of wages and hours were in effect only for certain zones. Bakers, soft furniture manufacturing, coal hoisting, and the coal industry each had schedules in one zone, retail gasoline service in four, taxi drivers in one and barbers had schedules in 64 zones. During 1953, 22 new schedules applying to the construction industry were made binding, three of which were applied for the first time.

In *Manitoba*, Part II of the Manitoba Fair Wage Act provides similar machinery for fixing wages and hours in any business, trade or undertaking, except agriculture. Orders in Council under this legislation have been passed fixing wages and hours in the barbering and hairdressing trades.

In *Saskatchewan*, 17 schedules were in effect at Mar. 31, 1953. These included one for barbers covering the whole Province; others applied to bakers and bakery salesmen, carpenters, electrical workers, painters, shoe repairers, and beauty-culture operators in one or more areas.

In *Alberta*, 29 schedules were in effect during 1953. These included, in one or more areas, schedules governing bakers and bakery salesmen, certain individual building trades, dairy employees, garage and service-station employees, radio service, laundry and dry-cleaning employees and barbers. Two new schedules were made binding during the year.

Regulation of Hours and Annual Holidays.—Five provinces—Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia—have statutes that either place absolute limits on working hours or require time and one-half the regular rate to be paid if work is continued after specified limits. There is, in addition, an Act of limited application in Quebec. In the provinces that have no special hours-of-work legislation, the only statutory regulation of hours, apart from that described on pp. 759-760, under industrial standards Acts and the Quebec Collective Agreement Act, is that imposed by factories Acts, mines Acts and, in Newfoundland, an Act governing shops. In New Brunswick and Quebec, the limits imposed by the factories Acts apply only to women and boys under 18 years of age. Several minimum wage Acts give authority for the regulation of hours as well as wages.

In Ontario, there is a maximum eight-hour day and 48-hour week for certain workers. In Alberta, the maximum daily and weekly hours in the cities of Calgary, Edmonton, Lethbridge, and Medicine Hat are eight and 44; in the remainder of the Province they are eight and 48. In British Columbia, hours are limited to eight in a day and 44 in a week. In these three Provinces, the Acts apply to most workers except farm labourers and domestic servants. In Saskatchewan, an Act of 1947 requires time and one-half to be paid for work after eight hours daily and 44 hours weekly. The Act applies to workers in all industries except agriculture and domestic service. A Manitoba Act of 1949, covering most industrial workers in the Province, requires time and one-half to be paid for work done after eight hours in a day and after 48 hours in a week for men and 44 hours for women. In all provinces that have Acts regulating hours, longer hours may be worked in an emergency or by permission of the administrative authority.

Six provinces have legislation in effect providing for annual holidays with pay for workers in most industries. In five of these provinces—Quebec, Ontario, Manitoba, Alberta, and British Columbia—workers are entitled to a week's holiday with pay after a year of employment. Two weeks' holiday is given in Saskatchewan after a year of employment, in Alberta after two years, and in Manitoba after three. A worker employed for less than a year is entitled, in Quebec, to a half-day for each month of employment and, in Saskatchewan, to one day for each month. Coal miners in Alberta are entitled to one day's holiday with pay for every 20 days worked in a month but not more than two weeks' holiday in a year.

Farm workers are excluded from the holiday provisions in all provinces and domestic servants in all but Manitoba and Saskatchewan. The Manitoba Act excludes independent contractors and railway and express companies under federal jurisdiction. In addition, Quebec exempts forest operations workers, public corporation employees, salesmen, janitors and watchmen, and certain part-time workers. Ontario exempts professional workers, salesmen, and funeral directors and embalmers. Manitoba and Saskatchewan exempt ranch and market-garden employees, and British Columbia, professional workers and horticultural workers.

A New Brunswick Act, requiring an annual vacation of one week with pay in the mining and construction industries, will come into force on proclamation.

Minimum Wage Regulations.—In Nova Scotia, the minimum wage law applies only to women; in Ontario, though the Act applies to both sexes, Orders in Council apply only to women. In New Brunswick, Manitoba, Alberta and British Columbia, there are separate Orders for men and women but in British Columbia many Orders cover both sexes. In Quebec and Saskatchewan all Orders apply to both sexes. Under the Newfoundland Minimum Wage Act, 1950, a general Order for male workers is in effect.

Table 1 shows the minimum rates in effect in July 1954 for several classes of establishments in the principal cities. In Newfoundland, New Brunswick, British Columbia and, with respect to men in Manitoba, the rates set are for the entire Province. Elsewhere rates vary according to zone. The rates given apply to the hours specified or to the normal work-week of the establishment, if less, except at Montreal, Que., and Winnipeg, Man. No work-week is specified in the Newfoundland Order in Council.

1.—Minimum Weekly Wage Rates for Experienced Workers in Certain Cities, July 1954

Item and Type of Establishment	St. John's[1]	Halifax[2]	Saint John[3]	Montreal	Toronto[2]	Winnipeg[4]	Regina	Edmonton[5]	Vancouver
Hours per week..	..	48	48	48–60[6]	48	44	44	44	44
	cts. per hour	$	cts. per hour	cts. per hour	$	cts. per hour	$	$	$
Factories........	50	16·80	40	51	16·80	55	26	24	0·40[7]
Laundries, etc...	50	16·80	40	51	16·80	55	26	24	0·40[7]
Shops...........	50	16·80	40	51	16·80	55	26	24	18
Hotels, restaurants, etc......	50	16·80	38	44[8]	16·80	55	26	24	22
Beauty parlours .	50	16·80	40	51	16·80	55	26	24	25
Theatres and amusement places..........	50	16·80	40	51	16·80	55	26	24	18
Offices..........	50	16·80	40	51	16·80	55	26	24	18[2]

[1] Males over 18 years of age only. [2] Females only. [3] Females; 55 cents for men in canning or processing of fish, vegetable or fruit. [4] Females; 60 cents for men applying to a 48-hour week. [5] Females; $26 for men over 21 years of age. [6] Rates apply to 48 or 54 hours in factories; 48 hours in offices; 54 hours in laundries, shops, beauty parlours and theatres; 60 hours in hotels. [7] Hourly rates. [8] Cooks, 58 cents, kitchen help, 51 cents; bell boys, 30 cents.

Section 2.—The Labour Force

Subsection 1.—Labour Force Statistics of the Census of 1951

Details of the labour force, as defined in the 1951 Census, relative to age, sex and occupation groups are given at pp. 692-704 of the 1954 Year Book.

Subsection 2.—Current Labour Force Statistics

During World War II up-to-date information on the size and characteristics of the labour supply was a necessity and to meet the possibility of disturbed economic conditions in the post-war period a current and periodic analysis of the state of employment in Canada was organized. A labour force survey, on a sample basis, was conducted in the autumn of 1945, and quarterly surveys were carried on until November 1952, when the survey was placed on a monthly basis. A multi-stage area sample was used involving the selection of progressively smaller sample areas and ultimately of households. Random methods of choice were used at every stage of selection so that all members of the population had an equal chance of inclusion. The present sample includes about 30,000 households in over 110 different areas of Canada, which include 34 cities having a population of 30,000 or over in 1951 in addition to some smaller urban, and various rural, areas.

The estimates of the labour force are restricted to the civilian labour force; net strength of the Armed Forces is obtainable directly from official sources. Inmates of institutions and Indians living on reserves are also excluded. Because of inaccessibility and high cost of enumeration, certain remote areas of the country have been excluded from the sample, but estimates for remote areas of Ontario were included in 1954 although they are given no chance of selection for enumeration. This resulted in an increase of about 0·6 p.c. in the estimates for Canada as a whole. This percentage can be applied to figures for previous years to make them comparable.

The labour force surveys provide a classification of persons 14 years of age and over on the basis of their activity, during the week that precedes the beginning of the survey, and who had jobs or were seeking work during the survey week. These divisions of the labour force are defined as follows:—

(1) **Persons with jobs**—This category comprises:—

- (*a*) *persons at work*—those who did any work for pay or profit or who did unpaid work which contributed to the running of a farm or business operated by a relative; and
- (*b*) *persons with jobs not at work*—those who had jobs but did not work because of illness, bad weather, vacation, industrial dispute, or temporary layoff with definite instructions to return to work within 30 days of the time of being laid off.

Persons who worked part of the survey week and also looked for work are classed as "persons with jobs".

(2) **Persons without jobs and seeking work.**—This classification includes those persons who were looking for work during the survey week and did not work. Persons who were temporarily away from their jobs during the whole of the survey week seeking other work are considered as without jobs and are included in this category. In addition to those who actively looked for work, this classification includes persons who would have looked for work, except that they were temporarily ill, were on indefinite or prolonged layoff, or believed that no work was available.

Information relating to the population 14 years of age or over not in the labour force is also collected. Persons not in the labour force include such groups as those going to school or keeping house in their own homes, persons who are permanently unable to work because of old age or other reason, and persons who are retired or voluntarily idle. Persons, such as housewives, students and others, who worked part-time are classed as "persons with jobs" or, if looking for work, they are classed as "persons without jobs and seeking work".

The estimates derived from the labour force surveys are subject to sampling error. In general, the percentage error tends to decrease as the size of the estimate increases. The chances are about 19 out of 20 that the difference between the estimate and the figure which would have been obtained from a complete count is less than that shown below.

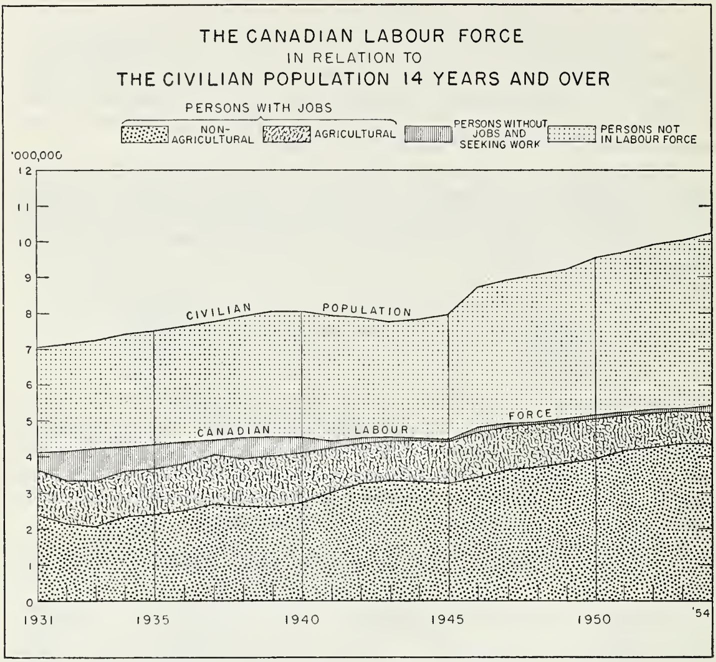
Size of Estimate	*Sampling Variability*
50,000	8,000
100,000	11,000
500,000	25,000
1,000,000	33,000
5,000,000	54,000

Data in Table 2 for June 1, 1946 to 1954 are compiled from labour force surveys conducted in late May or early June of those years. The information for years before 1946 is taken from estimates based upon 1931 and 1941 Census material rearranged according to the definitional system used in the labour force surveys, the revised census data being linked with the June 1946 survey on the basis of monthly and annual employment and unemployment figures.

2.—Estimates of the Civilian Labour Force and its Main Components, June 1, 1931-54[1]

Year	Civilian Population (14 years of age or over)	Civilian Labour Force (14 years of age or over)							Persons not in the Labour Force (14 years of age or over)
		Persons With Jobs					Persons Without Jobs and Seeking Work	Total Labour Force	
		Non-Agriculture			Agriculture	Total (with jobs)			
		Paid Workers	Other[2]	Total (non-agriculture)					
	'000	'000	'000	'000	'000	'000	'000	'000	'000
1931	7,039	2,006	421	2,427	1,203	3,630	475	4,105	2,934
1932	7,163	1,828	381	2,209	1,223	3,432	733	4,165	2,998
1933	7,287	1,698	470	2,168	1,243	3,411	817	4,228	3,059
1934	7,411	1,910	493	2,403	1,263	3,666	624	4,290	3,121
1935	7,539	1,920	532	2,452	1,284	3,736	618	4,354	3,185
1936	7,665	1,972	576	2,548	1,304	3,852	565	4,417	3,248
1937	7,785	2,085	661	2,746	1,324	4,070	406	4,476	3,309
1938	7,912	2,053	625	2,678	1,344	4,022	516	4,538	3,374
1939	8,035	2,056	655	2,711	1,364	4,075	523	4,598	3,437
1940	8,053	2,173	636	2,809	1,329	4,138	418	4,556	3,497
1941	7,969	2,538	476	3,014	1,210	4,224	193	4,417	3,552
1942	7,900	2,770	488	3,258	1,127	4,385	134	4,519	3,381
1943	7,797	2,906	434	3,340	1,107	4,447	75	4,522	3,275
1944	7,856	2,950	369	3,319	1,126	4,445	62	4,507	3,349
1945	7,992	2,914	363	3,277	1,134	4,411	72	4,483	3,509
1946[3]	8,672	2,953	475	3,428	1,257	4,685	123	4,808	3,864
1947[3]	8,896	3,104	545	3,649	1,159	4,808	91	4,899	3,997
1948[3]	9,023	3,189	537	3,726	1,173	4,899	80	4,979	4,044
1949[3]	9,154	3,289	545	3,834	1,102	4,936	100	5,036	4,118
1950[3,4]	9,509	3,393	554	3,947	1,053	5,000	141	5,141	4,368
1951[3,4]	9,592	3,585	534	4,119	980	5,099	80	5,179	4,413
1952[3,4]	9,812	3,744	510	4,254	917	5,171	105	5,276	4,536
1953[3,4]	10,006	3,795	525	4,320	887	5,207	114	5,321	4,685
1954[5]	10,234	3,761	528	4,289	886	5,175	217	5,392	4,842

[1] Exclusive of persons in institutions, remote areas and Indian reserves. [2] Employers, 'own-account' and unpaid family workers. [3] Revised since publication of the 1954 Year Book. [4] Newfoundland included from 1950. [5] Coverage increased in 1954, *see* text on p. 768.



Main Characteristics of the Canadian Labour Force, 1931-54.*—The civilian population 14 years of age or over (exclusive of persons in institutions) increased in the period June 1931 to June 1954 by about 2,954,000 or at a rate of about 128,000 persons a year. The strength of the Armed Services rose very considerably from 5,000 in 1931 and 9,000 in mid-1939 to 779,000 at June 1944 but declined to 114,000 by June 1954. Consequently, the civilian population (exclusive of persons in institutions) which increased very little from June 1939 to June 1940, declined in size until, in mid-1943, there were 238,000 fewer persons than in 1939. From June 1943 to June 1944, there was a small increase in the civilian population (59,000) as the rate of increase of the Armed Forces levelled off. From 1945 to 1947 the civilian population increased markedly as a consequence of the rapid demobilization of the Forces.

In contrast, the civilian labour force maintained its strength notwithstanding large withdrawals to the Forces during the war years. The labour force of June 1942 was 102,000 greater than at June 1941 and that of June 1945 was 66,000 greater owing mainly to replacements from among those who would normally be outside the labour force. The group classed as "not in the labour force" usually represents a fairly constant percentage of the population but during the war years this category reached a low point in 1943 (162,000 persons fewer than the total of

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* Newfoundland data have been subtracted from 1954 totals; thus all statements made in this analysis are on the basis of the nine other provinces.

3,437,000 in 1939), increased by 74,000 between mid-1943 and mid-1944 and then moved sharply upward with the decline in wartime employment. (The increase was: June 1944 to June 1945, 160,000; and June 1945 to June 1946, 355,000.)

The number of civilian jobs increased considerably during the War as compared with pre-war experience (despite a decline in agricultural employment) and reached a peak of 4,447,000 in June 1943 (372,000 greater than June 1939). After registering a decline to 4,411,000 during the readjustment period represented by June 1945, the number of jobs continued to increase in post-war years to 5,086,000 in June 1954, which was a little lower than the all-time high for that month reached in June 1953.

Section 3.—Employment, Payrolls and Hours*

Subsection 1.—Employment and Payrolls by Industrial Divisions

For over 30 years, the Dominion Bureau of Statistics has made monthly surveys of employment in the leading non-agricultural industries, excluding education, health, domestic and personal services and government administration, etc. Statistics are published each month† showing geographic and industrial breakdowns for the following broad divisions: forestry (chiefly logging), mining, manufacturing, construction, transportation, storage and communication, public utilities, trade, finance, insurance and real estate, and certain services (chiefly hotels, restaurants, laundries, dry-cleaning plants and recreational and business services). In recent years, the grouping of data has conformed to the Canadian Standard Industrial Classification.

Over the years, monthly surveys have been extended from time to time as need for additional related data in the labour field has become apparent. In 1941, the collection of currently distributed payrolls was undertaken to complement the monthly employment series; subsequently, a record of weekly payrolls and average wages and salaries was built up, on an annual basis, for 1939, 1940 and 1941. Late in 1944, a current series on man-hours and hourly earnings was inaugurated. From January 1946, monthly inquiries into the sex distribution of the reported staffs replaced the annual and semi-annual surveys of immediately preceding years. Following the entry of Newfoundland into Confederation in 1949, the surveys were extended to that Province, for which separate data were published from 1950 until 1953. Since then, Dominion-wide statistics have been prepared on the base 1949 = 100. In 1953, a special bulletin‡ was issued giving historical series recalculated on that base from 1921, inclusive of Newfoundland from 1950.

Considerations of economy in time and money are largely responsible for limitation of the current inquiries to establishments usually employing 15 or more persons. This restriction results in the inclusion of industrial samples of varying size in the monthly survey, the variation depending upon the organization of industries in large or in small units; from the equally important geographic aspect, however, greater uniformity exists in the provincial coverage of total employees in the industries surveyed. In all industries and areas, the coverage is large.

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* Prepared in the Employment Section, Labour and Prices Division, Dominion Bureau of Statistics.

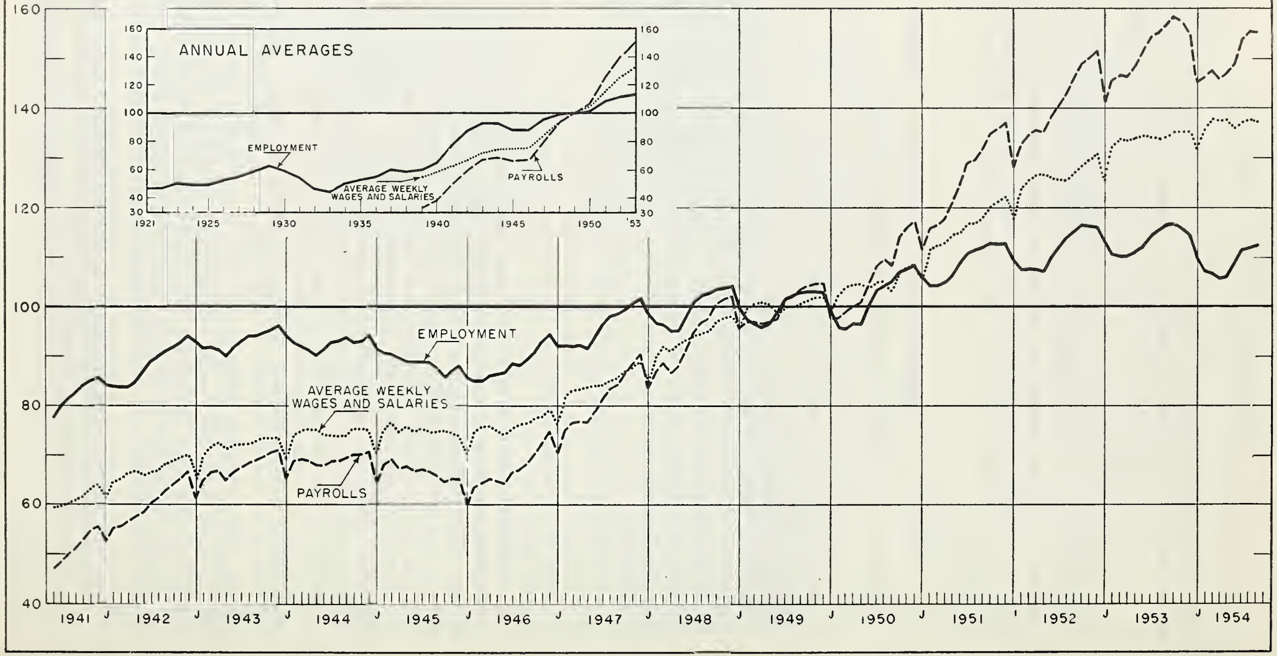
† *Employment and Payrolls, Man-Hours and Average Hourly Earnings.* The methods used in preparing the current statistics are explained in these bulletins.

‡ *Employment, Payrolls and Weekly Earnings, January 1949 – June 1953, with Historical Series.*

EMPLOYMENT, PAYROLLS AND AVERAGE WEEKLY WAGES AND SALARIES, 1941–54

(COMPOSITES OF NINE NON-AGRICULTURAL INDUSTRIES)

1949 = 100



In the post-war period, employment and payrolls have shown general and marked expansion, resulting in the establishment of successive new high levels, while hours of work generally have tended to diminish, owing in part to reductions in the amount of overtime work necessitated by wartime conditions, and in part to industrial agreements calling for lower standard hours of work. Improvement in employment in 1953 over 1952 was recorded mainly from Jan. 1 to Oct. 1, and the general gain in the year was slight. Moderate though fairly widely distributed increases were reported, although contractions in activity were indicated in a greater number of industries and areas than in recently preceding years. A favourable factor in 1953 was a decided decline, on the whole, in the time lost as a result of labour-management disputes as compared with 1952.

Employment.—For the seventh year in succession, industrial employment generally in 1953 showed expansion. The upward movement, which was on a smaller scale than in either 1952 or 1951, was limited to the first 10 months of the year. Although the index in October reached a new high of 116·9 (1949 = 100), the annual average at 113·4, was only 1·6 p.c. above that for 1952. On the whole, the month-to-month movements during the year followed the seasonal pattern. After October, however, the index numbers were slightly lower than in the corresponding period 12 months earlier. The general figure for 1953 was 53·3 points higher than in 1939, also substantially exceeding the wartime peak figure of 93·0 in 1943. At the post-war low in 1946, the index was 88·2.

The number of women employed as reported by the co-operating establishments in the main industrial groups throughout Canada rose by approximately 4 p.c. in 1953, and the number of men increased by 1 p.c. The disparity in the rates of increase reflected changes in the levels of activity in industries employing larger or smaller numbers of women. Manufacturing generally showed advances of 5·4 p.c. in number of women workers and of 3·2 p.c. in number of men as compared with 1952.

3.—Annual Average Index Numbers of Employment, by Industrial Group, 1941-53, and Monthly Indexes, 1952 and 1953

(Exclusive of Newfoundland prior to 1949)

Note.—These indexes are calculated as at the first day of each month, on the base 1949 = 100.

Year	Forestry (chiefly Logging)	Mining	Manufacturing	Construction	Transportation, Storage and Communication	Public Utility Operation	Trade	Finance, Insurance, Real Estate	Service[1]	Industrial Composite
Averages—										
1941	91·0	99·0	82·6	68·6	70·1	59·2	68·2	69·5	66·1	77·4
1942	95·1	95·9	101·6	70·2	74·6	58·0	68·0	72·9	70·5	87·9
1943	87·3	88·7	111·5	69·4	79·5	56·8	67·6	73·4	74·8	93·0
1944	104·4	86·5	110·6	51·9	82·6	57·0	71·6	75·0	79·6	92·5
1945	119·7	82·3	100·0	53·8	86·0	61·1	76·2	77·4	81·1	88·8
1946	129·9	86·9	91·0	69·5	89·3	71·1	83·4	85·3	88·3	88·2
1947	149·6	88·6	97·2	85·6	95·4	76·7	90·2	91·5	94·6	95·7
1948	138·4	97·2	100·1	95·4	99·0	89·0	96·3	96·0	99·1	99·7
1949	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	100·8	105·5	100·9	102·4	99·9	101·3	103·2	105·4	101·0	101·5
1951	138·6	110·6	108·0	110·2	106·1	103·4	107·4	115·2	103·1	108·8
1952	123·9	116·8	109·3	122·5	110·9	107·5	109·9	121·9	106·6	111·6
1953	100·0	111·7	113·3	118·6	111·3	112·1	113·2	122·4	108·7	113·4

For footnote, *see* end of table.

3.—Annual Average Index Numbers of Employment, by Industrial Group, 1941-53, and Monthly Indexes, 1952 and 1953—concluded

Year and Month	Forestry (chiefly Logging)	Mining	Manufacturing	Construction	Transportation, Storage and Communication	Public Utility Operation	Trade	Finance, Insurance, Real Estate	Service[1]	Industrial Composite
1952—										
Jan. 1........	181·5	113·0	104·4	104·2	108·4	103·3	114·3	121·2	101·3	109·4
Feb. 1........	173·6	114·3	105·3	98·1	106·3	102·3	105·2	121·0	100·8	107·4
Mar. 1........	167·8	115·5	106·5	96·2	106·0	102·5	104·5	120·9	101·4	107·6
Apr. 1........	126·1	114·9	107·0	100·6	108·4	103·1	105·7	120·9	102·9	107·5
May 1........	77·5	115·0	107·3	110·2	108·2	103·9	106·9	121·0	104·4	107·2
June 1........	98·6	117·1	108·5	122·3	111·7	107·4	107·5	121·4	107·2	110·3
July 1........	93·9	118·2	108·8	133·1	113·9	111·3	109·5	122·1	111·6	112·1
Aug. 1........	77·0	119·6	110·3	151·0	114·9	113·1	109·1	122·6	113·2	114·1
Sept. 1........	95·1	119·5	112·8	144·3	115·1	112·9	109·6	122·5	112·5	115·2
Oct. 1........	116·4	118·8	114·2	143·6	114·0	111·0	112·2	123·0	109·9	116·4
Nov. 1........	136·2	118·3	113·6	137·2	112·5	110·0	114·6	123·2	107·6	116·2
Dec. 1........	142·6	117·1	113·5	129·4	111·5	109·8	119·3	123·3	106·4	116·1
1953—										
Jan. 1........	129·5	114·9	111·4	111·3	108·9	108·2	120·4	123·1	106·1	113·0
Feb. 1........	115·7	114·4	111·9	101·9	105·4	106·4	110·8	123·2	106·3	110·3
Mar. 1........	103·8	113·4	112·7	93·7	105·1	105·9	110·1	123·3	105·6	110·0
Apr. 1........	77·8	111·9	112·9	95·9	105·6	106·1	110·9	123·3	106·3	110·0
May 1........	61·0	111·9	113·1	108·5	109·1	109·4	109·1	122·2	105·9	110·9
June 1........	83·7	112·1	113·4	119·0	112·2	113·4	110·8	119·3	107·0	112·4
July 1........	93·6	113·7	114·7	127·5	114·5	117·1	112·0	120·1	111·1	114·9
Aug. 1........	86·7	114·7	114·4	135·4	115·9	117·8	111·8	120·6	113·1	115·6
Sept. 1........	88·3	112·3	115·6	139·6	116·7	117·9	111·8	122·4	112·9	116·6
Oct. 1........	110·7	108·8	115·2	135·8	116·0	115·5	114·2	123·6	112·3	116·9
Nov. 1........	125·1	107·8	113·1	131·5	114·2	114·1	116·4	123·7	109·6	115·9
Dec. 1........	124·6	105·1	110·9	122·7	111·5	113·2	120·3	123·7	108·4	114·1
Percentage distribution in 1953[2]..	2·7	4·0	46·4	9·4	13·5	1·7	14·1	4·5	3·7	100·0

[1] Consists mainly of hotels, restaurants, laundries, dry-cleaning establishments and business and recreation service. [2] The proportion of employees reported in the industries to the total reported by all employers making returns in Canada. (Average of 12 months, 1953.)

4.—Annual Average Index Numbers of Employment, by Province, 1941-53, and Monthly Indexes, 1952 and 1953

Note.—These indexes are calculated as at the first day of the month, on the base 1949=100.

Year	N'f'ld.	P.E.I.	N.S.	N B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
Averages—											
1941....	..	75·7	90·0	82·1	80·3	77·9	74·1	76·1	65·5	67·9	77·4
1942....	..	70·8	103·3	89·8	94·1	87·0	80·0	78·1	70·9	82·2	87·9
1943....	..	74·7	106·8	95·0	100·9	90·0	83·1	81·5	74·3	94·5	93·0
1944....	..	85·9	105·0	98·4	99·1	89·5	85·8	85·5	77·6	92·5	92·5
1945....	..	81·9	101·5	98·6	92·8	86·7	85·3	86·4	76·3	87·5	88·8
1946....	..	87·2	95·4	98·1	90·4	86·8	89·6	92·2	82·6	83·6	88·2
1947....	..	93·3	92·1	104·3	97·8	94·7	93·6	97·2	88·1	97·1	95·7
1948....	..	102·6	99·6	105·2	101·2	98·9	97·2	99·5	93·7	101·3	99·7
1949....	..	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950....	..	110·3	95·6	102·6	100·5	102·7	100·8	100·8	104·5	100·8	101·5
1951....	111·7	112·6	100·3	109·0	109·2	110·4	103·9	106·0	112·4	106·1	108·8
1952....	130·2	123·2	104·0	109·5	113·4	112·0	106·0	111·4	120·8	106·7	111·6
1953....	140·9	116·4	101·2	101·4	112·8	114·7	107·2	116·0	128·5	108·4	113·4

For footnote, *see* end of table.

4.—Annual Average Index Numbers of Employment, by Province, 1941-53, and Monthly Indexes, 1952 and 1953—concluded

Year and Month	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Canada[1]
1952—											
Jan. 1	112·3	111·6	100·1	115·2	111·3	109·9	103·8	108·9	114·3	104·0	109·4
Feb. 1	106·8	116·8	101·3	112·5	109·5	108·4	101·4	101·9	111·9	100·3	107·4
Mar. 1	107·8	102·3	98·5	111·9	109·9	108·3	100·7	101·4	110·9	102·6	107·6
Apr. 1	112·2	135·9	99·9	116·2	107·8	108·4	101·3	101·6	111·8	105·2	107·5
May 1	115·0	111·8	98·1	101·1	106·4	108·8	102·5	105·4	114·8	107·5	107·2
June 1	129·8	122·1	101·7	105·4	110·8	110·7	105·9	113·5	118·7	108·8	110·3
July 1	133·1	127·0	107·8	107·9	114·9	113·5	107·5	116·2	123·3	95·5	112·1
Aug. 1	149·5	132·4	107·7	104·0	118·9	113·2	109·6	118·9	128·4	102·6	114·1
Sept. 1	149·5	133·2	109·9	110·8	116·2	114·6	109·6	117·5	130·5	112·6	115·2
Oct. 1	151·2	130·8	109·8	112·3	118·0	115·9	109·8	116·2	128·0	115·1	116·4
Nov. 1	150·0	127·3	107·5	106·9	118·5	115·8	109·5	117·5	128·3	114·4	116·2
Dec. 1	144·6	126·8	106·0	109·2	118·7	115·9	110·3	117·9	128·5	112·0	116·1
1953—											
Jan. 1	132·4	116·7	99·3	107·8	113·8	114·5	106·7	113·5	125·7	106·4	113·0
Feb. 1	125·3	110·8	101·0	100·6	110·6	113·1	104·0	106·2	121·6	101·0	110·3
Mar. 1	117·8	103·7	97·9	98·6	109·7	112·9	102·5	105·7	122·7	102·1	110·0
Apr. 1	122·4	104·0	96·9	96·6	108·3	113·2	102·9	105·7	121·6	104·6	110·0
May 1	133·6	108·3	97·4	94·8	109·1	113·4	104·8	109·2	123·6	106·5	110·9
June 1	144·1	118·8	100·7	99·6	111·8	113·7	106·7	115·1	127·7	108·1	112·4
July 1	154·7	119·6	103·9	100·4	113·7	115·7	109·3	119·7	131·3	111·6	114·9
Aug. 1	156·6	124·6	104·2	105·4	114·0	115·4	110·5	123·3	135·2	114·2	115·6
Sept. 1	156·0	124·7	104·0	107·1	115·6	116·5	111·1	123·3	135·6	114·7	116·6
Oct. 1	157·4	119·8	104·7	102·2	116·2	117·1	110·5	123·9	135·0	114·6	116·9
Nov. 1	149·8	125·2	103·9	101·9	116·3	116·3	108·7	124·1	132·4	110·2	115·9
Dec. 1	141·2	121·1	100·2	102·3	114·6	114·8	108·8	122·7	130·1	107·1	114·1
Percentage distribution in 1953[2]	1·7	0·2	3·4	2·4	28·5	42·5	5·1	2·4	5·0	8·8	100·0

[1] Exclusive of Newfoundland prior to 1949. [2] The proportion of employees reported in the provinces to the total reported by all employers making returns in Canada. (Average of 12 months 1953.)

Employment in the major industrial divisions covered by the monthly surveys showed greater variation in 1953 than in recently preceding years. Compared with 1952, there was an increase of 3·7 p.c. in manufacturing, resulting in an all-time high index, 1·6 p.c. above the previous peak figure in 1943. The improvement in the 12-month comparison extended to plants producing durable and non-durable manufactured goods, the former showing a gain of 6 p.c., and the latter of 1·6 p.c. Expansion continued in a number of the components of the durable goods category, notably the transportation equipment, aircraft and parts, and shipbuilding and repair industries, in which the indexes mounted by 12 p.c., 37 p.c., and 15 p.c., respectively. Certain groups which had experienced a recession in 1952, advanced in 1953 to new all-time levels. Among these industries were heating and cooking appliances and glass and glass products, employment in both classes rising by 15 p.c. in the year. Agricultural implements, which had shown greater activity in 1952 than in any other year since 1948, reported a loss of 21 p.c. in 1953. Declines in employment, beginning in 1952, in iron castings and wire and wire products were followed by further moderate losses in 1953.

Slight advances were recorded by some industries in the non-durable goods division of manufacturing, notably printing and rubber products. Employment in textiles, (excluding clothing), rose fractionally, following a 12 p.c. fall in 1952. The composite food index declined in 1953, although several of the component groups continued the expansion characteristic of the post-war period. Employment in the canned and cured fish industry, however, dropped by 15 p.c. in 1953, largely a result of labour-management disputes and unfavourable marketing conditions.

While employment in a majority of industries in the non-manufacturing sector showed little change or a moderately upward movement in 1953, three groups—forestry, mining and construction—reported curtailment. The loss in the last-named was minor, resulting from cutbacks in the highways, bridges and streets group; building construction, on the other hand, showed a small advance. Logging continued the unfavourable movement of 1952, employment decreasing by 19 p.c. in the year, bringing the index to 100·0, or to the 1949 level. The mining division was adversely affected in 1953 by prolonged labour disputes in the Ontario and Quebec gold fields, the Canada index falling by 4·4 p.c. from 1952. Employment in mining as a whole, however, was still slightly above the average for 1951, previously the maximum in the record. Transportation, storage and communication and trade reported advances of 0·4 p.c. and 3·0 p.c., respectively, in 1953, bringing the index numbers to peak positions. New high records were also established in public utility operation, finance, insurance and real estate, and in the service industries for which monthly data are obtained.

5.—Index Numbers of Employment, Industrial Divisions and Groups, by Annual Averages, 1939 and 1949-53

NOTE.—These indexes are calculated as at the first day of the month, on the base 1949=100.

Industry	Average 1939	Average 1949	Average 1950	Average 1951	Average 1952	Average 1953
Forestry (chiefly logging)	59·3	100·0	100·8	138·6	123·9	100·0
Mining	93·7	100·0	105·5	110·6	116·8	111·7
Metal mining	100·8	100·0	104·9	111·1	118·3	112·0
Gold	132·5	100·0	101·1	96·2	94·7	83·6
Other metal	66·9	100·0	108·9	126·9	140·7	137·6
Fuels	90·8	100·0	101·5	106·1	109·5	105·8
Coal	103·3	100·0	96·8	93·8	91·2	83·8
Oil and natural gas	42·5	100·0	119·8	153·0	171·8	177·1
Non-metal	72·6	100·0	119·7	122·5	132·9	130·7
Manufacturing	56·3	100·0	100·9	108·0	109·3	113·3
Food and beverages	63·3	100·0	101·1	102·9	105·1	104·6
Meat products	60·8	100·0	100·8	104·1	111·7	113·8
Dairy products	61·3	100·0	98·9	101·4	102·4	103·6
Canned and cured fish	72·3	100·0	102·7	111·5	110·1	94·1
Canned and preserved fruits and vegetables	65·6	100·0	96·3	106·5	107·3	103·9
Grain mill products	62·0	100·0	99·3	104·9	109·0	102·7
Bread and other bakery products	68·8	100·0	101·7	104·6	104·7	106·0
Biscuits and crackers	..	..	..	..	89·0	97·9
Distilled and malt liquors	48·7	100·0	99·2	100·7	100·7	104·2
Other beverages	56·0	100·0	108·0	103·5	107·7	109·4
Confectionery	..	100·0	..	..	89·0	90·1
Tobacco and tobacco products	87·4	100·0	95·9	88·5	85·8	86·6
Rubber products	69·3	100·0	103·0	109·0	102·1	109·2
Leather products	81·0	100·0	95·6	92·3	92·8	96·6
Boots and shoes (except rubber)	81·4	100·0	93·1	91·4	94·6	97·5
Other leather products	80·5	100·0	100·3	94·2	89 8	95·2

5.—Index Numbers of Employment, Industrial Divisions and Groups, by Annual Averages, 1939 and 1949-53—continued

Industry	Average 1939	Average 1949	Average 1950	Average 1951	Average 1952	Average 1953
Manufacturing—concluded						
Textile products (except clothing).....	67·9	100·0	101·6	105·2	93·1	94·5
Cotton yarn and broad woven goods.	86·4	100·0	105·0	112·1	94·8	95·3
Woollen goods......................	66·8	100·0	96·2	96·0	84·2	85·6
Synthetic textiles and silk..........	49·0	100·0	102·9	107·6	93·1	95·6
Clothing (textile and fur)............	71·3	100·0	99·4	101·6	100·0	101·7
Men's clothing......................	69·3	100·0	99·0	101·4	104·1	106·8
Women's clothing...................	65·0	100·0	102·7	105·3	105·4	100·5
Knit goods.........................	82·5	100·0	94·7	98·4	87·1	91·4
Fur goods..........................	63·2	100·0	99·0	94·6	88·0	91·5
Hats and caps......................	98·1	100·0	101·6	100·2	96·3	96·5
Wood products.......................	60·7	100·0	103·9	108·5	101·5	105·5
Saw and planing mills...............	59·5	100·0	106·6	112·7	103·6	106·7
Furniture..........................	61·3	100·0	104·3	107·4	101·3	106·9
Other wood products...............	64·6	100·0	92·8	93·5	93·7	98·2
Paper products.......................	58·8	100·0	100·6	108·1	108·6	109·8
Pulp and paper mills................	62·5	100·0	99·3	108·9	111·5	111·3
Other paper products...............	50·2	100·0	103·6	106·1	102·0	106·2
Printing, publishing and allied industries	66·1	100·0	104·1	105·4	104·3	106·8
Iron and steel products................	45·6	100·0	98·4	110·5	113·0	111·8
Agricultural implements............	28·7	100·0	91·9	96·2	105·5	83·8
Boilers and plate work.............	48·1	100·0	96·2	109·1	122·3	121·5
Fabricated and structural steel	39·1	100·0	99·5	112·2	131·5	137·1
Hardware and tools.................	50·5	100·0	97·4	110·2	105·1	108·7
Heating and cooking appliances.....	54·0	100·0	98·4	96·6	84·0	96·9
Iron castings.......................	42·6	100·0	96·8	110·1	102·5	100·7
Machinery manufacturing...........	41·6	100·0	97·8	111·8	115·9	115·8
Primary iron and steel..............	54·1	100·0	98·9	114·7	123·9	119·3
Sheet metal products...............	49·6	100·0	105·6	110·3	105·3	110·3
Wire and wire products.............	68·8	100·0	99·5	108·5	103·4	100·2
Transportation equipment............	45·9	100·0	98·9	115·9	136·7	153·0
Aircraft and parts..................	31·6	100·0	97·6	168·2	282·2	386·2
Motor-vehicles.....................	45·6	100·0	108·6	116·5	113·3	119·7
Motor-vehicle parts and accessories .	45·6	100·0	108·7	120·9	124·0	131·9
Railroad and rolling-stock equipment...........................	56·9	100·0	91·0	99·5	111·0	110·3
Shipbuilding and repairing..........	28·9	100·0	91·5	113·4	150·8	173·5
Non-ferrous metal products...........	48·6	100·0	98·0	109·5	110·0	118·1
Aluminum products.................	23·3	100·0	100·0	122·3	117·0	126·9
Brass and copper products..........	48·9	100·0	94·9	103·6	101·2	108·7
Smelting and refining..............	59·8	100·0	101·2	116·3	126·3	129·6
Electrical apparatus and supplies......	37·4	100·0	107·4	120·7	120·8	135·4
Non-metallic mineral products.........	46·2	100·0	104·7	113·8	110·5	113·5
Clay products......................	48·2	100·0	97·0	102·7	101·4	102·5
Glass and glass products............	46·3	100·0	106·0	110·5	101·6	117·0
Products of petroleum and coal........	65·6	100·0	105·4	113·1	119·1	119·4
Chemical products....................	47·6	100·0	102·4	109·6	113·9	116·9
Medicinal and pharmaceutical preparations........................	47·0	100·0	100·8	104·2	103·2	104·7
Acids, alkalis and salts.............	50·7	100·0	103·4	120·0	126·0	120·8
Other chemical products............	..	100·0	..	..	112·8	118·7
Miscellaneous manufacturing industries	50·2	100·0	102·2	101·9	97·9	107·1
Construction...........................	62·0	100·0	102·4	110·2	122·5	118·6
Building and structures...............	29·3	100·0	104·7	116·0	127·1	128·2
Highways, bridges and streets........	110·5	100·0	97·8	97·4	105·6	98·3
Transportation, storage, communication.	59·8	100·0	99·9	106·1	110·9	111·3
Transportation........................	62·4	100·0	98·3	104·3	109·2	109·3
Air transport and airports...........	18·5	100·0	98·6	107·2	126·1	138·9
Steam railways.....................	65·9	100·0	98·4	105·4	110·6	110·3
Maintenance of equipment.........	55·1	100·0	98·0	111·2	120·6	120·7
Maintenance of ways and structures	69·9	100·0	97·2	103·0	106·2	102·2
Transportation—steam railways..	66·5	100·0	98·3	104·1	108·9	110·1
Telegraphs.........................	65·4	100·0	100·3	110·7	118·3	124·4
Water transportation................	63·2	100·0	90·9	97·1	103·5	99·3
Electric and motor transportation...	..	..	..	..	103·6	107·1
Urban and interurban transportation.	56·3	100·0	100·3	97·1	94·5	93·4
Truck transportation................	54·1	100·0	111·1	126·3	133·5	136·8
Storage...............................	73·9	100·0	98·5	104·6	111·4	112·2
Grain elevators.....................	79·2	100·0	96·8	104·6	111·5	111·9
Storage and warehouse..............	55·2	100·0	103·8	102·4	107·0	112·4
Communication........................	41·2	100·0	107·8	115·2	118·9	121·4
Radio broadcasting.................	..	100·0	117·6	122·5	129·6	138·0
Telephone..........................	41·3	100·0	106·9	114·2	117·1	119·7

5.—Index Numbers of Employment, Industrial Divisions and Groups, by Annual Averages, 1939 and 1949-53—concluded

Industry	Average 1939	Average 1949	Average 1950	Average 1951	Average 1952	Average 1953
Public utility operation	54·9	100·0	101·3	103·4	107·5	112·1
Electric light and power	53·1	100·0	101·5	106·3	111·3	115·4
Other public utilities	70·0	100·0	90·3	81·1	80·6	87·0
Trade	61·5	100·0	103·2	107·4	109·9	113·2
Wholesale	60·2	100·0	102·5	108·4	113·2	116·1
Retail	62·3	100·0	103·4	106·9	107·9	111·8
Finance, insurance and real estate	67·8	100·0	105·4	115·2	121·9	122·4
Banking, investment and loan	62·9	100·0	104·5	117·0	125·4	125·8
Insurance	75·7	100·0	106·7	112·0	115·7	116·2
Service	56·8	100·0	101·0	103·1	106·6	108·7
Hotels and restaurants	55·4	100·0	99·8	100·9	103·6	104·4
Laundries and dry-cleaning plants	63·1	100·0	98·9	99·5	101·0	101·4
Other service	..	100·0	103·9	111·7	118·0	133·3
Industrial composite	**60·1**	**100·0**	**101·5**	**108·8**	**111·6**	**113·4**

Provincially, the most marked gains in employment occurred in Newfoundland and Alberta, expansion in construction being important in both areas. In Alberta, where the movement was at a slower rate than in 1951 and 1952, continued exploitation of oil and natural gas resources, with related industrial development, was also a factor. The general advance in industrial employment in Ontario in 1953 amounted to 2·4 p.c., while staffs reported in manufacturing increased by 5·2 p.c., raising the provincial index to a position slightly above the general level in Canada. Among the non-manufacturing classes, the trend was unfavourable in forestry, mining and construction. Prolonged labour-management disputes in the gold fields contributed materially to the decline in the mining division.

Despite a fractional decline in the industrial composite index in Quebec, factory employment in that Province rose by 3 p.c., to a level exceeded only by the 1943 and 1944 figures. Moderately upward movements were indicated in Manitoba, Saskatchewan and British Columbia. The greatest reduction in the year occurred in New Brunswick, caused largely by substantial curtailment in logging operations, in construction, transportation, storage and communication. The loss of 7 p.c. in 1953 brought the index for that Province to its lowest level since 1949.

Table 6 gives index numbers of employment in the eight largest metropolitan areas. Small gains in employment were shown in the 1953 annual averages for these centres but industrial activity in December 1953 was lower than in the same month of 1952 in all centres except Toronto, where employment reached a new all-time high for the time of year. Among the 24 remaining centres for which data are segregated in the monthly surveys, there were considerable variations in the movements of employment in 1953, with the changes recorded ranging from a loss of 11 p.c. in Brantford to a gain of 12 p.c. in Oshawa, Ont. and in Edmonton, Alta. Lower levels were reported in approximately a third of the group.

6.—Annual Average Index Numbers of Employment, by Metropolitan Area, 1941-53, and Monthly Indexes, 1952 and 1953

NOTE.—These indexes are calculated as at the first day of the month, on the base 1949=100 .

Year	Montreal	Quebec	Toronto	Ottawa-Hull	Hamilton	Windsor	Winnipeg	Vancouver
Averages—								
1941	76·5	87·3	74·4	77·5	79·3	79·0	74·4	64·2
1942	87·6	111·9	87·0	82·7	92·5	97·8	79·7	88·7
1943	97·6	135·7	93·6	85·3	92·5	105·7	83·6	105·9
1944	97·7	134·1	89·2	84·8	89·7	100·8	87·2	104·6
1945	90·4	109·3	86·7	82·8	87·6	84·1	85·9	96·1
1946	88·6	85·4	86·7	88·1	82·2	82·9	90·3	85·9
1947	94·3	93·2	93·2	91·4	91·6	92·2	93·9	96·9
1948	97·1	100·5	97·3	96·5	96·9	94·5	97·1	102·1
1949	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	101·3	98·7	104·1	103·1	100·8	102·2	100·1	99·0
1951	106·6	101·6	110·7	108·4	109·5	107·7	102·7	101·4
1952	110·9	105·2	113·3	108·9	109·2	107·0	104·0	100·1
1953	113·8	110·9	119·6	109·4	111·4	111·1	104·1	102·2
1952—								
Jan. 1	107·2	99·7	111·3	110·0	107·2	98·5	102·2	98·6
Feb. 1	106·1	97·1	109·1	106·6	105·9	98·1	100·8	96·5
Mar. 1	106·7	98·5	109·6	106·1	106·8	103·2	99·8	97·6
Apr. 1	107·8	100·2	110·3	106·1	108·1	107·8	100·6	99·8
May 1	108·9	102·9	111·1	107·1	108·8	110·2	102·1	100·9
June 1	110·5	104·7	112·1	108·1	109·7	102·7	103·6	101·5
July 1	112·3	107·4	114·4	109·3	109·5	115·2	104·6	94·7
Aug. 1	112·0	109·1	113·5	110·0	109·2	111·3	105·9	97·2
Sept. 1	112·7	105·4	114·5	110·3	109·1	109·6	105·5	102·6
Oct. 1	114·5	112·6	116·1	109·9	111·3	109·3	106·0	103·1
Nov. 1	115·1	112·3	118·0	111·1	112·4	107·5	107·4	103·6
Dec. 1	116·4	112·6	119·7	111·6	112·8	111·1	108·9	105·5
1953—								
Jan. 1	113·2	108·8	119·0	111·4	111·4	111·0	105·1	103·5
Feb. 1	112·1	106·4	117·1	107·8	111·1	109·0	102·5	99·6
Mar. 1	112·4	106·6	117·5	107·0	110·0	112·4	101·3	99·9
Apr. 1	113·3	108·6	118·3	108·0	111·7	114·8	101·8	100·1
May. 1	113·8	109·5	118·5	108·2	111·5	115·3	102·6	100·0
June 1	113·9	110·5	118·7	109·0	111·7	114·3	103·2	101·3
July 1	114·2	112·0	119·8	109·9	111·7	116·2	105·0	102·4
Aug. 1	113·3	113·7	118·6	109·7	111·7	113·6	105·3	103·9
Sept. 1	114·8	114·4	120·2	110·4	111·4	108·5	106·1	104·6
Oct. 1	114·8	114·7	121·5	110·2	112·2	109·4	105·9	104·3
Nov. 1	115·0	113·9	122·8	110·1	111·3	104·4	104·8	103·5
Dec. 1	115·0	112·3	123·4	110·6	110·8	104·5	106·2	103·1
Percentage distribution[1]	14·8	1·6	14·6	1·7	3·1	1·9	3·3	3·8

[1] Proportion of employees reported in metropolitan areas to the total reported by all employers making returns in Canada (Average of 12 months, 1953.)

Earnings.—Wage and salary disbursements* in the industries included in the monthly surveys continued the upward trend which has been interrupted only once since 1939, the index of payrolls, on the base 1949=100, rising by 8 p.c. in 1953 as compared with 1952. The gain, though important, was not equal to that in either of the two preceding years, and was also rather below the average rise recorded annually since 1945. Upward adjustments in wage rates continued an important factor in the generally higher earnings in 1953.

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* Monthly estimates of total wages, salaries and supplementary labour income are given in DBS bulletins, *Estimates of Labour Income.*

Payrolls were higher than in 1952 and earlier years in all main industrial divisions except forestry, in which the index fell by 15 p.c. in the 12-month comparison. Lower wages and salaries were also reported by establishments in a few industries within the major divisions, including gold and coal mining, canned and cured fish, women's clothing and agricultural implements. In most cases, the losses reflected slackness in the industry. A further factor in the gold fields was the existence of long-drawn-out labour-management disputes.

Provincially, the greatest increases in payrolls in 1953 occurred in Newfoundland and Alberta, where the reported disbursements rose 17 p.c. and 13 p.c., respectively, as compared with a year earlier. A new maximum was reached in Quebec, in which payrolls advanced by 6 p.c., and in Ontario, where the gain amounted to 8 p.c. The 1953 level in New Brunswick was fractionally under that of 1952, while increases recorded in the remaining provinces ranged from over 4 p.c. in Nova Scotia to 12 p.c. in Saskatchewan.

Table 7 gives the 1952 and 1953 annual index numbers of employment, payrolls and average earnings for the main industrial divisions, the provinces and the larger industrial centres. Table 8 shows the month-to-month movements of average weekly wages and salaries in the two years, with annual averages from 1941. The per capita earnings reported in the leading non-agricultural industries as a group stood at $57.30 in 1953, compared with $54.13 in 1952 and $49.61 in 1951. In the 15 years since the payroll record was initiated, average earnings generally have mounted by 145 p.c., accompanying an advance of 89 p.c. in industrial employment. Between 1939 and 1953, the consumer price index rose by 83 p.c.

7.—Annual Index Numbers of Employment, Payrolls and Average Earnings in Industrial Establishments, with Average Weekly Wages and Salaries, 1952 and 1953.

Industry	Index Numbers (1949=100)						Average Weekly Wages and Salaries Reported	
	Employment		Aggregate Weekly Payrolls		Average Weekly Earnings			
	1952	1953	1952	1953	1952	1953	1952	1953
							$	$
Industry								
Forestry (chiefly logging)	123·9	100·0	171·7	146·0	136·2	143·1	55·31	58·11
Mining	116·8	111·7	147·9	149·5	126·9	133·4	65·35	68·70
Manufacturing	109·3	113·3	139·7	152·4	127·6	134·2	56·11	59·01
Durable goods[1]	117·2	124·2	150·2	167·6	128·0	135·0	60·35	63·64
Non-durable goods[1]	102·5	104·1	129·2	137·9	125·9	131·8	51·86	54·26
Construction	122·5	118·6	160·4	173·7	134·1	146·7	55·37	60·57
Transportation, storage and communication	110·9	111·3	130·2	141·5	116·7	126·2	56·48	61·09
Public utility operation	107·5	112·1	138·6	152·8	128·1	135·4	61·66	65·16
Trade	109·9	113·2	136·6	147·7	124·1	130·5	45·89	48·26
Finance, insurance and real estate	121·9	122·4	141·7	149·2	116·4	122·3	49·13	51·64
Service[2]	106·6	108·7	123·8	138·4	121·4	131·4	34·05	36·87

For footnotes, *see* end of table, p. 781.

7.—Annual Index Numbers of Employment, Payrolls and Average Earnings in Industrial Establishments, with Average Weekly Wages and Salaries, 1952 and 1953—concluded.

Province and City	Index Numbers (1949=100)						Average Weekly Wages and Salaries Reported	
	Employment		Aggregate Weekly Payrolls		Average Weekly Earnings			
	1952	1953	1952	1953	1952	1953	1952	1953
							$	$
Province								
Newfoundland	130·2	140·9	178·3	209·5	135·9	147·9	51·00	55·54
Prince Edward Island	123·2	116·4	145·2	153·6	119·4	132·7	40·08	44·53
Nova Scotia	104·0	101·2	126·9	131·5	121·9	128·7	45·88	48·45
New Brunswick	109·5	101·4	131·6	131·0	120·9	128·7	46·04	48·99
Quebec	113·4	112·8	141·8	149·9	125·4	132·4	51·66	54·55
Ontario	112·0	114·7	141·8	153·6	127·1	133·9	56·36	59·38
Manitoba	106·0	107·2	128·4	137·9	121·2	128·6	51·73	54·87
Saskatchewan	111·4	116·0	136·4	152·6	122·7	131·4	50·90	54·54
Alberta	120·8	128·5	149·3	169·3	123·6	132·5	54·90	58·81
British Columbia	106·7	108·4	139·0	150·2	130·3	138·8	59·46	63·34
Totals	**111·6**	**113·4**	**140·3**	**151·5**	**126·0**	**133·4**	**54·13**	**57·30**
City								
St. John's	114·1	117·3	140·2	153·3	122·1	130·6	39·36	42·08
Sydney	106·2	101·7	128·5	130·0	121·0	127·9	56·76	59·98
Halifax	116·6	115·5	144·8	148·8	124·4	129·7	44·10	45·96
Saint John	107·7	102·7	129·4	128·5	120·5	125·6	43·16	45·01
Quebec	105·2	110·9	129·3	146·1	123·2	131·4	43·95	46·86
Sherbrooke	106·2	105·3	133·6	136·1	125·6	129·8	45·10	46·61
Three Rivers	105·1	101·5	129·5	131·4	121·6	127·8	50·69	53·30
Drummondville	90·7	85·0	114·1	112·8	126·0	132·7	48·95	51·55
Montreal	110·9	113·8	138·0	150·6	124·9	132·4	52·24	55·39
Ottawa-Hull	108·9	109·4	135·3	143·1	124·3	131·1	48·75	51·45
Peterborough	98·1	97·6	126·7	132·3	129·1	135·4	57·82	60·68
Oshawa	140·6	157·1	176·4	201·7	125·6	127·6	63·98	64·95
Niagara Falls	153·1	166·5	213·5	248·2	138·9	149·0	63·36	67·98
St. Catharines	124·0	122·1	161·7	162·9	130·2	133·3	64·38	65·84
Toronto	113·3	119·6	144·2	161·3	128·6	136·1	56·65	59·92
Hamilton	109·2	111·4	138·0	146·6	126·3	131·5	58·94	61·34
Brantford	99·9	88·5	129·2	114·3	129·5	129·5	56·58	56·58
Galt	102·3	108·6	133·1	148·1	129·6	136·4	50·93	53·60
Kitchener	102·0	108·7	130·2	146·9	127·6	135·2	51·87	54·94
Sudbury	130·7	134·5	165·2	180·4	126·3	134·1	67·57	71·76
London	108·8	113·8	139·2	153·3	127·6	134·0	52·01	54·63
Sarnia	122·8	122·7	165·8	178·4	135·4	145·7	65·83	70·83
Windsor	107·0	111·1	133·0	148·1	124·2	132·4	63·03	67·19
Sault Ste. Marie	130·1	137·9	162·3	180·4	125·0	131·0	63·76	66·80
Fort William-Port Arthur	118·3	120·1	150·1	159·5	126·3	131·9	57·37	59·93
Winnipeg	104·0	104·1	129·7	136·3	124·8	131·5	49·06	51·69
Regina	106·9	112·3	133·7	147·9	125·7	131·8	48·08	50·42
Saskatoon	113·0	117·4	141·4	156·9	125·2	133·2	46·88	49·86
Edmonton	129·9	145·9	166·4	206·8	128·2	142·2	52·05	57·71
Calgary	121·7	128·6	153·6	170·6	125·9	132·8	52·82	55·74
Vancouver	100·1	102·2	127·4	137·4	127·4	134·7	55·77	58·95
Victoria	106·6	110·2	136·1	149·8	128·6	136·0	53·77	56·86

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[1] The durable goods group includes wood products, iron and steel products, transportation equipment, non-ferrous metal products, electrical apparatus and supplies, and non-metallic mineral products; the non-durable goods group includes the remaining manufacturing industries. [2] Mainly hotels, restaurants, laundries, dry-cleaning establishments and business and recreation service.

8.—Average Weekly Wages and Salaries, by Industrial Group, 1941-53, and Monthly Averages, 1952 and 1953

Year and Month	Forestry (chiefly Logging)	Mining	Manufacturing	Construction	Transportation, Storage and Communication	Public Utility Operation	Trade	Finance, Insurance, Real Estate	Service[1]	Industrial Composite
	$	$	$	$	$	$	$	$	$	$
Averages—										
1941	19·18	32·64	26·73	23·78	30·34	31·88	22·81	30·00	17·43	26·65
1942	20·70	34·81	28·99	27·29	31·70	34·16	24·07	31·46	18·21	28·62
1943	24·78	36·09	31·39	30·83	33·15	35·70	25·24	32·48	19·42	30·79
1944	26·54	38·05	32·49	30·63	34·62	37·01	26·21	33·61	20·25	31·85
1945	26·90	38·61	32·46	30·66	36·05	36·91	26·85	34·77	20·71	32·04
1946	29·03	39·21	32·27	31·62	37·53	38·17	28·45	36·11	21·90	32·48
1947	35·42	43·03	36·34	34·85	41·23	41·05	31·29	38·34	23·48	36·19
1948	39·11	48·77	40·67	37·99	45·51	45·16	34·38	40·08	25·87	40·06
1949	40·62	51·49	43·97	41·28	48·39	48·14	36·97	42·22	28·05	42·96
1950	42·01	53·95	46·21	43·27	49·15	51·14	38·81	43·90	29·50	44·84
1951	48·40	59·82	51·25	48·36	53·76	55·93	42·71	46·26	31·61	49·61
1952	55·31	65·35	56·11	55·37	56·48	61·66	45·89	49·13	34·05	54·13
1953	58·11	68·70	59·01	60·57	61·09	65·16	48·26	51·64	36·87	57·30
1952—										
Jan. 1	51·31	60·18	51·82	46·04	55·63	59·34	44·04	47·47	32·65	50·42
Feb. 1	52·84	63·42	55·35	54·33	55·32	60·75	45·41	47·71	33·35	53·19
Mar. 1	56·84	64·01	55·72	55·73	56·33	61·30	45·75	48·38	33·91	53·95
Apr. 1	59·37	65·68	56·55	55·97	55·00	61·73	45·62	49·36	33·75	54·32
May 1	55·93	64·90	56·55	55·38	56·62	61·53	45·71	49·61	34·16	54·34
June 1	52·73	64·84	56·09	55·01	56·32	61·62	46·23	49·58	34·01	54·08
July 1	53·07	65·48	55·95	54·68	56·39	60·79	46·35	49·53	33·69	53·96
Aug. 1	53·64	65·14	55·70	54·32	56·94	61·20	46·45	49·46	33·97	53·89
Sept. 1	55·98	66·07	56·35	56·55	57·07	61·51	46·39	49·47	33·87	54·55
Oct. 1	56·27	67·20	57·09	57·98	57·09	61·90	46·32	49·49	34·62	55·12
Nov. 1	56·42	68·05	57·65	59·00	57·55	63·63	46·37	49·81	35·16	55·65
Dec. 1	59·35	69·22	58·46	59·42	57·56	64·59	46·06	49·73	35·41	56·12
1953—										
Jan. 1	57·59	65·46	54·92	51·51	59·58	63·45	46·29	50·06	34·83	53·81
Feb. 1	56·30	68·59	58·82	59·97	59·79	64·95	47·22	50·26	36·16	56·72
Mar. 1	61·12	67·70	59·25	61·50	60·77	65·31	47·81	50·32	36·55	57·40
Apr. 1	59·22	67·06	59·43	61·11	60·11	64·83	47·90	51·79	36·75	57·33
May 1	58·23	68·08	59·43	59·99	61·21	64·64	48·37	52·06	37·31	57·52
June 1	56·75	68·87	59·43	61·08	61·87	65·70	48·45	52·01	37·23	57·72
July 1	57·94	68·23	59·16	60·94	61·80	64·71	48·80	51·94	36·80	57·57
Aug. 1	59·21	68·54	58·93	61·34	61·35	65·01	49·05	52·07	36·76	57·52
Sept. 1	59·45	69·28	58·83	61·93	61·45	64·80	49·03	52·16	36·66	57·61
Oct. 1	55·08	70·23	59·69	63·32	61·93	65·98	49·03	52·09	37·38	58·11
Nov. 1	56·86	70·30	59·98	62·29	61·92	65·73	48·90	52·44	37·86	58·14
Dec. 1	59·58	72·01	60·29	61·81	61·31	66·76	48·27	52·50	38·11	58·13

[1] Consists mainly of hotels, restaurants, laundries, dry-cleaning establishments and business and recreation service.

Man-Hours and Hourly Earnings.—To complement the monthly surveys of employment and payrolls, the Dominion Bureau of Statistics, late in 1944, undertook the collection of current material on man-hours and hourly earnings, and weekly wages. The inquiries relate only to wage-earners for whom employers keep a record of hours worked, mainly hourly-rated or production workers. As a result, statistics are available for smaller numbers of industries and of wage-earners than in the employment and payroll series, since most establishments in many of the non-manufacturing industries included in the latter record do not maintain accurate records of hours worked. The coverage of total wage-earners in manufacturing and other industries for which data are given in Table 9, however, is high.

9.—Average Hours and Earnings in Specified Industries and Areas 1951-53

Industry, Province and City	Average Hours Worked			Average Hourly Earnings			Average Weekly Wages		
	1951	1952	1953	1951	1952	1953	1951	1952	1953
	No.	No.	No.	cts.	cts.	cts.	$	$	$
Industry									
Mining	43·1	42·7	42·7	133·4	147·1	153·8	57·50	62·81	65·67
Metal mining	44·1	44·4	44·4	134·8	148·2	156·5	59·45	65·80	69·49
Coal mining	39·5	38·2	37·9	136·7	148·6	150·4	54·00	56·77	57·00
Manufacturing	41·8	41·5	41·3	116·8	129·2	135·8	48·82	53·62	56·09
Durable goods[1]	42·0	41·6	41·6	125·8	139·8	147·1	52·84	58·16	61·19
Non-durable goods[1]	41·7	41·3	40·9	107·2	117·4	122·9	44·70	48·49	50·27
Construction	40·3	41·6	41·6	117·6	131·4	143·7	47·39	54·66	59·78
Buildings and structures	39·5	40·9	40·7	127·1	142·8	156·8	50·20	58·41	63·82
Highways, bridges and streets	41·9	41·9	41·4	95·1	105·0	112·8	39·85	44·00	46·70
Service	42·5	42·6	42·0	69·3	73·6	78·2	29·45	31·35	32·84
Hotels and restaurants	43·5	43·7	42·7	68·8	72·8	77·8	29·93	31·81	33·22
Laundries and dry-cleaning plants	40·9	40·9	41·3	67·3	71·7	75·1	27·53	29·33	31·02
Province									
Newfoundland	44·0	43·2	41·6	112·8	124·7	132·8	49·63	53·87	55·24
Nova Scotia	42·2	41·5	41·2	100·9	114·5	120·5	42·58	47·52	49·65
New Brunswick	43·8	43·0	42·1	103·8	112·7	119·0	45·46	48·46	50·10
Quebec	43·5	43·0	42·7	104·5	115·5	121·9	45·46	49·67	52·05
Ontario	41·3	40·9	40·9	123·7	137·0	143·4	51·09	56·03	58·65
Manitoba	41·4	40·8	40·3	112·5	122·9	131·4	46·58	50·14	52·95
Saskatchewan	41·0	41·2	40·7	117·4	129·6	136·5	48·13	53·40	55·56
Alberta	41·0	40·5	40·2	116·6	130·0	139·7	47·81	52·65	56·16
British Columbia	37·8	38·0	38·0	140·7	157·7	164·0	53·18	59·93	62·32
City									
Montreal	42·0	41·9	41·7	109·2	120·9	128·3	45·86	50·66	53·50
Toronto	40·6	40·5	40·7	122·3	135·7	143·4	49·65	54·96	58·36
Hamilton	40·2	39·7	39·7	136·2	150·0	155·9	54·75	59·55	61·89
Windsor	39·7	39·3	40·5	143·7	159·1	165·2	57·05	62·53	66·91
Winnipeg	41·0	40·5	40·1	111·4	121·3	130·1	45·67	49·13	52·17
Vancouver	37·3	37·5	37·7	138·4	154·8	161·6	51·62	58·05	60·92

[1] The durable goods group includes wood products, iron and steel products, transportation equipment, non-ferrous metal products, electrical apparatus and supplies, and non-metallic mineral products; the non-durable goods group includes the remaining manufacturing industries.

In the last few years, average hours in manufacturing have shown relatively little change, but there have been general and marked declines as compared with the earlier part of the record. In the division as a whole, the reduction in 1953 from 1945 amounted to three hours per week, or 6·8 p.c. Curtailment of overtime work, prevalent during the war years, and a widespread shortening of the standard hours of work in the post-war period, were the main factors in the falling-off. The average hourly earnings, on the other hand, have shown successive and substantial increases, the general figure in manufacturing having risen by nearly 96 p.c. since the last year of the War. The advance in the weekly wages, though smaller than that in the hourly average as a result of shorter hours, was nevertheless impressive, at almost 83 p.c. The trends of hourly earnings and weekly wages in recent years have been upward in all industries and areas.

Subsection 2.—Earnings and Hours of Work of Male and Female Employees in Manufacturing Establishments*

The Dominion Bureau of Statistics makes an annual survey of earnings and hours of men and women wage-earners and salaried employees in a specified week each autumn to supplement the data collected in the monthly series on employment, payrolls and man-hours. The monthly surveys, like the annual inquiry, cover the manufacturing establishments usually employing a minimum of 15 persons, representing almost 90 p.c. of all employees in the industry as reported in the annual Census of Manufactures. In addition to the general averages of earnings and hours of wage-earners and salaried employees of the two sexes, the annual survey obtains more detailed data in a three-year cycle. In 1953, a segregation of employees by amounts earned in the last week of October was made; in 1952, a distribution of wage-earners in a given range of hours was obtained, and, in 1951, information for office, clerical and related workers was segregated from that for managerial, professional and other salaried employees.

Establishments co-operating in the annual surveys are asked to report for all full-time, casual and part-time employees on staff in the week ending Oct. 31, except home-workers and persons absent without pay throughout the week. No data are given for proprietors, firm members, pensioners, nor for staffs in separately-organized sales offices. The gross remuneration of the reported employees is reported before deductions are made for taxes, unemployment insurance, etc., and include such items as regularly-paid bonuses, overtime and vacation pay for the week. Part-time, full-time and overtime hours worked and hours of paid absence are given.

The period from 1946 to 1953, to which the annual series relates, has been characterized by a consistently upward movement in average earnings, weekly wages rising by 75·3 p.c. and weekly salaries by 68·5 p.c. in the seven years. The post-war trend toward reduced working time has resulted in a substantially greater advance (83·4 p.c.) in the average of hourly than of weekly earnings of the wage-earners. The amounts and proportions of the increases are given in Table **10.**

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* Prepared in the Employment Section, Labour and Prices Division, Dominion Bureau of Statistics. More complete information is published in the DBS annual bulletins, *Earnings and Hours in Manufacturing.*

10.—Average Earnings, with Increases over the Preceding Year, Weeks Ended Oct. 31, 1946-53

(As reported by manufacturers usually employing 15 or more persons)

Year	Men			Women			Both Sexes		
	Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year	
	AVERAGE HOURLY EARNINGS OF WAGE-EARNERS								
	$	$	p.c.	$	$	p.c.	$	$	p.c.
1946[1]	0·807	..	..	0·502	..	..	0·741	..	..
1947[1]	0·921	0·114	14·1	0·582	0·080	15·9	0·851	0·110	14·8
1948	1·023	0·102	11·1	0·651	0·069	11·9	0·946	0·095	11·2
1949	1·066	0·043	4·2	0·683	0·032	4·9	0·984	0·038	4·0
1950	1·142	0·076	7·1	0·725	0·042	6·1	1·056	0·072	7·3
1951	1·313	0·171	15·0	0·825	0·100	13·8	1·222	0·166	15·7
1952	1·402	0·089	6·8	0·863	0·038	4·6	1·295	0·073	6·0
1953	1·471	0·069	4·9	0·910	0·047	5·4	1·359	0·064	4·9

[1] As at Nov. 30.

10.—Average Earnings, with Increases over the Preceding Year, Weeks Ended Oct. 31, 1946-53—concluded

Year	Men			Women			Both Sexes		
	Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year		Average Earnings	Increase over Preceding Year	
	AVERAGE WEEKLY WAGES								
A	$	$	p.c.	$	$	p.c.	$	$	p.c.
1946[1]	36·23	..	..	20·08	..	..	32·38	..	..
1947[1]	41·35	5·12	14·1	23·11	3·03	15·1	37·19	4·81	14·9
1948	45·73	4·38	10·6	25·91	2·80	12·1	41·25	4·06	10·9
1949	47·33	1·60	3·5	27·18	1·27	4·9	42·61	1·36	3·3
1950	50·93	3·60	7·6	29·00	1·82	6·7	45·94	3·33	7·8
1951	56·46	5·53	10·9	31·27	2·27	7·8	51·32	5·38	11·7
1952	60·85	4·39	7·8	34·17	2·90	9·3	55·17	3·85	7·5
1953	62·71	1·86	3·1	35·07	0·90	2·6	56·75	1·58	2·9
	AVERAGE WEEKLY SALARIES								
B	$	$	p.c.	$	$	p.c.	$	$	p.c.
1946[1]	53·21	..	..	25·91	..	..	43·85	..	..
1947[1]	60·21	7·00	13·2	28·68	2·77	10·7	49·78	5·93	13·5
1948	63·47	3·26	5·4	31·26	2·58	9·0	52·91	3·13	6·3
1949	65·37	1·90	3·0	32·62	1·36	4·4	54·85	1·94	3·7
1950	69·35	3·98	6·1	34·38	1·76	5·4	58·74	3·89	7·1
1951	77·55	8·20	11·8	38·42	4·04	11·8	65·98	7·24	12·3
1952	82·60	5·05	6·5	41·26	2·84	7·4	70·75	4·77	7·2
1953	86·43	3·83	4·6	43·13	1·87	4·5	73·87	3·12	4·4

[1] As at Nov. 30.

Tables **11** and **12** continue the record published in previous editions of the Year Book, showing geographical and industrial averages for wage-earners and salaried employees in the last week of October. Table **13** gives, for each province, the distribution of male and female wage-earners by amounts earned in the last week in October 1953, with a comparison for 1950, when such information was last obtained.

Industrial and geographical variations in working time, as well as year-to-year changes, as shown in these tables, result from a variety of causes. These include: the length of the standard work week; the numbers of casual and part-time workers and their hours in the reported week; amounts of overtime worked, and of time lost through absenteeism, labour turnover, industrial disputes, lay-offs, etc.; differing occupational requirements, and varying proportions of men and women. Women generally average substantially shorter time than men. Their standard work week tends to be lower, relatively small proportions of women are employed in industries where the work week is above average, and they show a higher incidence of part-time work and of absenteeism.

Variations in average earnings are related to the distribution of employees in industries or areas where pay levels are above or below average, because of differences in basic pay rates, in occupational skills, in amounts of bonus or commission payments, in levels of activity in particular establishments, etc. Salary levels are further affected by the prevalence of head offices, the type and size of establishment, and varying requirements for highly-paid professional and executive personnel, most of whom are men. Women's earnings are generally well below those of men in the same industries, chiefly as a result of pay differentials, occupational differences, the greater incidence of part-time work and absenteeism among women, and their proportions of younger and less experienced workers. The proportions of women reported in the 1952 and 1953 surveys and the relationship of their wages and salaries to men's earnings are given in Table **14**.

11.—Average Hours and Earnings of Male and Female Wage-Earners for the Last Week of October, 1952 and 1953

(As reported by manufacturers usually employing 15 or more persons)

Province City and Industry	Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
	Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
	No.	No.	No.	cts.	cts.	cts.	$	$	$
Province									
Newfoundland 1952	44·6	40·2	44·1	131·8	48·8	123·4	58·78	19·62	54·42
1953	43·8	37·4	43·2	138·2	53·8	132·1	60·50	20·13	57·11
Nova Scotia 1952	42·4	42·5	42·4	118·9	56·2	110·6	50·41	23·89	46·89
1953	41·7	41·2	41·6	127·4	56·9	118·3	53·15	23·45	49·27
New Brunswick 1952	44·8	40·8	44·1	116·5	72·1	109·6	52·19	29·42	48·33
1953	43·8	37·0	42·7	124·4	71·6	117·0	54·48	26·51	49·93
Quebec 1952	45·5	40·1	44·0	126·9	79·8	115·1	57·74	32·00	50·64
1953	44·4	38·5	42·8	134·5	84·8	122·5	59·72	32·67	52·48
Ontario 1952	42·8	39·3	42·1	148·6	93·6	138·4	63·60	36·78	58·27
1953	42·0	38·7	41·4	154·6	97·5	143·5	65·00	37·74	59·34
Manitoba 1952	42·2	39·7	41·6	133·5	82·2	123·0	56·34	32·63	51·17
1953	41·7	37·9	40·9	142·0	84·4	130·8	59·21	31·98	53·48
Saskatchewan 1952	41·8	38·9	41·4	132·3	91·3	127·7	55·30	35·52	52·87
1953	41·6	37·8	41·2	141·2	99·5	136·9	58·73	37·62	56·33
Alberta 1952	42·0	38·2	41·4	138·8	95·5	133·1	58·30	36·48	55·10
1953	41·7	38·1	41·2	147·7	100·9	141·7	61·66	38·45	58·43
British Columbia 1952	39·7	36·2	39·3	164·6	102·5	158·3	65·35	37·11	62·21
1953	39·8	36·4	39·5	170·9	105·1	164·1	68·10	38·28	64·76
Totals 1952	**43·4**	**39·6**	**42·6**	**140·2**	**86·3**	**129·5**	**60·85**	**34·17**	**55·17**
1953	**42·6**	**38·5**	**41·7**	**147·1**	**91·0**	**135·9**	**62·71**	**35·07**	**56·75**
City									
Montreal 1952	44·3	39·0	42·7	134·5	85·4	120·8	59·58	33·31	51·58
1953	43·6	37·9	41·9	141·6	91·1	128·0	61·78	34·50	53·61
Toronto 1952	42·7	39·0	41·7	150·9	95·4	137·2	64·43	37·21	57·21
1953	42·2	38·5	41·2	158·9	99·8	144·0	67·03	38·46	59·31
Hamilton 1952	41·5	39·2	41·0	164·9	101·0	152·9	68·43	39·59	62·69
1953	41·0	38·0	40·4	167·4	103·5	154·3	68·69	39·30	62·31
Windsor 1952	41·4	39·5	41·2	166·5	113·1	161·9	68·93	44·67	66·70
1953	40·6	38·1	40·4	170·9	118·3	166·3	69·37	45·05	67·09
Winnipeg 1952	41·8	39·7	41·4	132·0	82·8	121·2	55·18	32·87	50·18
1953	41·3	37·8	40·5	141·0	85·0	129·3	58·28	32·12	52·41
Vancouver 1952	39·1	37·6	38·9	164·2	101·9	155·0	64·20	38·31	60·30
1953	39·4	37·3	39·1	172·6	106·3	162·8	67·94	39·66	63·59
Industry									
Food and beverages 1952	44·7	39·1	43·1	121·6	79·6	110·8	54·36	31·12	47·75
1953	44·1	38·8	42·6	128·1	83·3	116·2	56·52	32·31	49·47
Meat products 1952	42·0	38·0	41·3	148·2	114·0	142·3	62·24	43·32	58·77
1953	41·5	37·9	40·8	154·2	115·9	147·6	64·06	43·91	60·28
Canned and preserved 1952	44·0	34·5	39·4	102·1	71·1	88·8	44·92	24·53	34·99
fruits and vegetables. 1953	44·7	37·2	40·6	106·2	73·9	90·1	47·45	27·53	36·59
Bread and other bakery 1952	46·7	42·0	45·8	114·1	69·9	106·6	53·28	29·36	48·82
products. 1953	46·2	40·2	45·1	120·6	74·5	112·7	55·76	29·94	50·80
Tobacco and tobacco products 1952	42·6	39·7	40·8	141·4	113·8	124·9	60·24	45·18	50·96
1953	41·8	39·7	40·5	147·5	118·4	129·5	61·69	46·99	52·43
Rubber products 1952	42·8	40·6	42·3	148·6	102·5	137·2	63·60	41·62	58·04
1953	42·3	38·6	41·4	153·1	108·0	142·8	64·74	41·73	59·08
Leather products 1952	42·2	39·4	41·0	109·1	72·2	93·6	46·04	28·45	38·38
1953	39·9	36·7	38·5	113·6	76·7	98·4	45·27	28·18	37·90

11.—Average Hours and Earnings of Male and Female Wage-Earners for the Last Week of October, 1952 and 1953—concluded

Industry		Average Hours Worked			Average Hourly Earnings			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes	Men	Women	Both Sexes
		No.	No.	No.	cts.	cts.	cts.	$	$	$
Industry—concluded										
Textile products (except clothing).	1952	44·7	41·2	43·5	113·5	88·9	105·0	50·73	36·63	45·68
	1953	42·3	38·9	41·1	116·5	90·8	107·6	49·28	35·34	44·20
Cotton yarn and broad woven goods.	1952	42·1	40·6	41·6	115·3	96·5	108·8	48·54	39·18	45·26
	1953	38·3	36·9	37·8	116·3	98·1	110·1	44·53	36·22	41·60
Clothing (textile and fur)	1952	42·5	38·8	39·9	127·2	79·5	93·7	54·06	30·85	37·39
	1953	40·6	37·3	38·2	131·4	83·0	97·3	53·33	30·94	37·15
Men's clothing	1952	41·5	39·3	39·9	126·2	78·7	92·4	52·37	30·93	36·87
	1953	39·3	37·1	37·7	129·5	82·1	96·0	50·83	30·49	36·23
Women's clothing	1952	38·2	36·1	36·5	155·0	85·2	99·7	59·21	30·76	36·39
	1953	36·6	35·0	35·3	157·5	88·7	101·8	57·69	31·08	35·96
Knit goods	1952	45·4	41·1	42·6	119·0	78·0	92·9	54·03	32·06	39·58
	1953	44·0	39·9	41·3	124·5	81·1	96·8	54·83	32·34	39·95
Wood products	1952	44·0	41·1	43·8	120·0	90·9	118·4	52·80	37·36	51·86
	1953	44·0	40·4	43·8	123·6	95·0	122·0	54·36	38·35	53·40
Saw and planing mills	1952	43·3	41·0	43·2	127·5	109·8	126·9	55·21	45·02	54·82
	1953	43·3	39·4	43·2	130·2	116·4	129·8	56·43	45·91	56·08
Furniture	1952	45·3	41·0	44·9	108·4	86·7	106·6	49·11	35·55	47·86
	1953	45·1	40·5	44·7	113·8	91·5	112·0	51·31	37·09	50·09
Paper products	1952	45·5	41·6	45·1	149·2	82·7	142·5	67·89	34·40	64·27
	1953	44·0	40·0	43·6	160·8	89·4	153·4	70·77	35·77	66·85
Pulp and paper mills	1952	45·8	41·9	45·7	153·1	89·2	152·1	70·12	37·37	69·51
	1953	43·9	37·6	43·8	166·2	103·0	165·1	72·97	38·76	72·31
Other paper products	1952	44·5	41·5	43·4	131·1	81·8	113·8	58·34	33·95	49·39
	1953	44·5	40·4	43·0	138·3	87·5	121·0	61·53	35·35	52·00
Printing, publishing and allied industries.	1952	40·6	38·0	40·0	167·1	84·2	149·1	67·84	32·00	59·64
	1953	40·7	37·9	40·0	176·2	89·8	157·6	71·65	34·06	63·10
Iron and steel products	1952	42·9	40·1	42·8	149·3	105·6	147·4	64·05	42·35	63·09
	1953	42·2	39·6	42·1	156·5	111·5	154·4	66·10	44·20	65·02
Iron castings	1952	43·4	41·3	43·4	146·3	108·8	145·6	63·49	44·93	63·19
	1953	43·2	40·1	43·1	154·0	118·2	153·5	66·51	47·37	66·21
Machinery manufacturing	1952	44·3	41·0	44·1	141·5	107·8	139·8	62·68	44·20	61·65
	1953	43·7	40·5	43·5	151·1	117·9	149·4	66·04	47·73	65·04
Primary iron and steel	1952	41·5	37·9	41·4	163·4	124·9	163·0	67·81	47·34	67·48
	1953	40·7	35·1	40·6	171·4	135·1	171·2	69·69	47·46	69·51
Transportation equipment	1952	42·4	38·5	42·3	152·5	118·2	151·6	64·66	45·51	64·13
	1953	41·8	38·1	41·6	158·2	123·3	157·2	66·11	47·00	65·45
Aircraft and parts	1952	46·6	42·3	46·4	157·9	123·5	156·9	73·58	52·24	72·80
	1953	43·5	39·5	43·3	160·3	132·4	159·1	69·67	52·31	68·89
Motor-vehicles	1952	41·4	27·2	41·2	166·5	134·2	166·2	68·93	36·50	68·47
	1953	40·6	31·5	40·5	169·0	131·0	168·5	68·63	41·22	68·19
Motor-vehicle parts and accessories.	1952	42·9	38·6	42·4	159·4	120·7	155·1	68·38	46·59	65·76
	1953	40·0	38·0	39·7	161·4	125·0	156·9	64·51	47·57	62·33
Railroad and rolling-stock equipment.	1952	39·8	..	39·8	142·1	..	142·1	56·56	..	56·56
	1953	39·9	..	39·9	156·9	..	156·8	62·66	..	62·63
Shipbuilding and repairing	1952	41·6	38·8	41·6	142·1	77·5	141·5	59·11	30·07	58·86
	1953	44·1	39·5	44·1	147·7	80·4	147·1	65·21	31·75	64·89
Non-ferrous metal products	1952	42·2	41·0	42·1	152·9	85·8	148·1	64·52	35·18	62·35
	1953	41·6	39·8	41·5	159·9	91·2	155·2	66·59	36·30	64·43
Smelting and refining	1952	41·1	..	41·1	163·7	..	163·6	67·28	..	67·24
	1953	41·0	37·5	40·9	170·0	104·3	169·7	69·62	39·14	69·46
Electrical apparatus and supplies.	1952	42·8	40·1	42·1	150·9	111·4	140·8	64·59	44·67	59·28
	1953	42·6	40·1	41·8	158·0	114·8	145·1	67·24	46·05	60·65
Non-metallic mineral products	1952	45·5	40·2	45·1	132·3	89·4	129·2	60·20	35·94	58·27
	1953	44·7	40·9	44·4	139·2	92·9	135·8	62·26	38·03	60·28
Products of petroleum and coal	1952	41·5	..	41·5	174·7	..	174·3	72·50	..	72·33
	1953	41·7	..	41·6	185·2	..	184·8	77·17	..	76·96
Chemical products	1952	42·8	39·6	42·3	143·0	86·4	133·7	61·20	34·21	56·56
	1953	42·9	39·5	42·3	148·3	90·2	138·9	63·57	35·63	58·72
Miscellaneous manufacturing industries.	1952	44·3	39·8	42·4	119·6	80·4	103·9	52·98	32·00	44·05
	1953	43·7	40·0	42·2	128·8	85·4	112·4	56·37	34·17	47·47
Averages, Durable Goods	**1952**	**43·0**	**40·1**	**42·8**	**144·7**	**104·5**	**141·9**	**62·22**	**41·90**	**60·73**
	1953	**42·5**	**39·8**	**42·3**	**151·0**	**109·8**	**147·8**	**64·15**	**43·77**	**62·48**
Averages, Non-durable Goods.	**1952**	**43·9**	**39·5**	**42·3**	**133·8**	**82·5**	**116·8**	**58·74**	**32·59**	**49·41**
	1953	**42·8**	**38·2**	**41·2**	**141·6**	**86·3**	**123·7**	**60·66**	**33·01**	**50·97**
Averages, Manufacturing Industries.	**1952**	**43·4**	**39·6**	**42·6**	**140·2**	**86·3**	**129·5**	**60·85**	**34·17**	**55·17**
	1953	**42·6**	**38·5**	**41·7**	**147·1**	**91·0**	**135·9**	**62·71**	**35·07**	**56·75**

12.—Average Hours and Earnings of Salaried Employees for the Last Week of October 1952 and 1953

(As reported by manufacturers usually employing 15 or more persons)

Province City and Industry		Salaried Employees					
		Average Hours Worked			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes
		No.	No.	No.	$	$	$
Province							
Newfoundland	1952	43·0	41·3	42·7	71·47	31·55	62·62
	1953	42·0	41·0	41·8	78·07	34·44	68·54
Nova Scotia	1952	43·2	39·8	42·3	68·54	34·74	60·30
	1953	40·9	39·2	40·5	72·01	35·48	62·82
New Brunswick	1952	42·2	39·5	41·5	71·50	35·44	61·83
	1953	41·1	40·6	40·9	73·48	35·25	62·96
Quebec	1952	40·0	38·2	39·5	79·92	40·52	68·88
	1953	39·7	37·9	39·2	84·12	42·33	72·23
Ontario	1952	39·6	37·8	39·1	85·77	42·24	72·73
	1953	39·2	37·6	38·7	89·28	44·23	75·69
Manitoba	1952	40·4	38·5	39·9	73·66	37·27	64·14
	1953	40·2	38·8	39·9	76·47	37·98	66·35
Saskatchewan	1952	42·0	40·3	41·5	67·22	38·11	58·08
	1953	41·3	39·4	40·7	71·66	40·16	61·30
Alberta	1952	40·9	39·4	40·5	76·73	40·55	67·20
	1953	40·4	38·8	40·0	79·64	42·05	69·93
British Columbia	1952	40·0	38·3	39·6	84·76	42·00	74·54
	1953	40·0	38·4	39·6	89·70	43·84	78·41
Totals	**1952**	**39·9**	**38·1**	**39·4**	**82·60**	**41·26**	**70·75**
	1953	**39·5**	**37·9**	**39·0**	**86·43**	**43·13**	**73·87**
City							
Montreal	1952	39·4	37·8	39·0	81·53	42·48	70·18
	1953	39·1	37·5	38·6	86·07	44·37	73·74
Toronto	1952	39·2	37·2	38·5	85·47	43·57	72·16
	1953	38·6	37·4	38·2	89·11	45·68	75·30
Hamilton	1952	38·9	37·6	38·5	89·14	41·92	74·44
	1953	38·9	37·7	38·6	92·29	43·33	77·31
Windsor	1952	41·1	39·1	40·6	99·54	49·19	85·78
	1953	39·6	39·0	39·4	102·75	51·09	88·33
Winnipeg	1952	40·3	38·5	39·8	73·41	37·43	63·83
	1953	40·1	38·6	39·7	76·45	38·18	66·26
Vancouver	1952	39·4	37·9	39·0	83·84	41·26	71·75
	1953	39·1	37·9	38·7	85·96	43·46	73·43
Industry							
Food and beverages	1952	41·1	38·7	40·5	73·74	39·65	64·68
	1953	40·6	38·4	40·0	78·32	41·55	68·37
Meat products	1952	41·0	39·8	40·7	77·74	46·09	71·51
	1953	40·7	38·6	40·3	81·52	47·24	74·57
Canned and preserved fruits and vegetables.	1952	40·7	38·4	40·0	71·72	36·09	60·28
	1953	40·6	38·7	39·9	75·96	39·41	64·25
Bread and other bakery products	1952	44·9	39·6	43·2	62·67	34·82	53·61
	1953	44·0	40·2	42·8	65·46	36·74	56·52
Tobacco and tobacco products	1952	37·7	37·2	37·5	78·96	47·34	68·33
	1953	37·4	37·2	37·3	86·27	49·05	73·72
Rubber products	1952	39·1	37·9	38·7	78·53	40·87	67·63
	1953	39·1	38·2	38·9	82·25	41·84	71·04
Leather products	1952	41·2	38·4	40·4	69·22	35·35	58·74
	1953	40·6	37·9	39·8	73·25	37·24	61·71
Textile products (except clothing)	1952	40·0	38·3	39·4	82·79	39·50	68·65
	1953	40·5	38·1	39·7	84·77	40·87	70·73
Cotton yarn and broad woven goods.	1952	39·2	38·1	38·8	82·13	37·11	66·21
	1953	39·7	38·0	39·1	85·22	39·56	69·29

12.—Average Hours and Earnings of Salaried Employees for the Last Week of October 1952 and 1953—concluded

Industry		Salaried Employees					
		Average Hours Worked			Average Weekly Earnings		
		Men	Women	Both Sexes	Men	Women	Both Sexes
		No.	No.	No.	$	$	$
Industry—concluded							
Clothing (textile and fur)	1952	40·3	38·4	39·5	76·11	38·74	60·73
	1953	40·6	38·2	39·6	78·81	40·18	62·41
Men's clothing	1952	39·9	38·3	39·4	72·67	36·58	59·49
	1953	39·9	38·4	39·4	76·03	38·48	62·22
Women's clothing	1952	40·1	38·5	39·4	74·53	42·83	60·90
	1953	39·9	37·9	39·0	77·63	44·99	62·92
Knit goods	1952	40·1	37·2	38·8	80·86	36·82	61·60
	1953	41·6	38·8	40·4	83·46	38·23	63·63
Wood products	1952	42·6	38·4	41·5	77·06	38·83	67·77
	1953	42·1	38·5	41·2	81·52	40·28	71·35
Saw and planing mills	1952	43·2	39·1	42·4	77·21	40·37	69·79
	1953	43·0	39·6	42·3	82·54	41·63	74·12
Furniture	1952	41·0	37·7	39·9	76·94	37·26	64·10
	1953	40·7	37·5	39·7	81·03	38·78	67·64
Paper products	1952	38·7	37·4	38·4	97·11	43·80	83·19
	1953	38·3	37·1	38·0	102·39	45·92	87·68
Pulp and paper mills	1952	39·2	37·9	38·9	103·59	46·03	90·82
	1953	38·6	37·3	38·3	109·82	48·50	96·35
Other paper products	1952	37·8	36·9	37·5	83·56	41·12	69·49
	1953	37·6	36·9	37·4	87·22	42·93	72·53
Printing, publishing and allied industries.	1952	38·0	37·6	37·9	74·67	38·48	61·13
	1953	37·4	37·0	37·3	78·01	40·95	63·88
Iron and steel products	1952	39·5	38·0	39·1	82·53	40·62	71·71
	1953	39·3	37·6	38·9	86·02	42·71	74·88
Iron castings	1952	40·1	37·4	39·4	81·39	40·25	70·89
	1953	40·1	37·2	39·4	85·22	41·77	74·57
Machinery manufacturing	1952	39·6	38·0	39·1	78·22	39·44	67·36
	1953	39·3	37·9	38·9	82·73	42·27	71·48
Primary iron and steel	1952	39·1	37·7	38·8	95·01	43·48	83·57
	1953	39·3	37·0	38·8	97·43	44·79	85·51
Transportation equipment	1952	42·5	39·2	41·7	87·79	44·92	77·61
	1953	40·2	38·8	39·9	90·20	45·93	79·43
Aircraft and parts	1952	44·2	39·0	42·8	89·14	44·18	77·42
	1953	40·3	39·1	40·0	89·05	44·46	77·12
Motor-vehicles	1952	41·5	40·0	41·1	97·44	51·31	86·77
	1953	40·4	39·7	40·3	100·74	52·68	89·53
Motor-vehicle parts and accessories.	1952	40·1	39·0	39·8	88·00	43·68	75·32
	1953	39·8	38·5	39·5	90·32	45·53	77·79
Railroad and rolling-stock equipment.	1952	41·6	39·4	41·3	77·65	42·74	73·02
	1953	41·0	38·8	40·7	84·10	45·81	79·31
Shipbuilding and repairing	1952	42·2	38·8	41·5	75·95	37·14	68·13
	1953	40·2	38·3	39·8	79·55	38·16	70·77
Non-ferrous metal products	1952	39·4	37·8	39·0	90·39	42·39	78·70
	1953	39·9	37·8	39·4	93·16	44·44	80·30
Smelting and refining	1952	40·2	39·5	40·1	94·31	46·69	88·48
	1953	41·6	39·2	40·7	94·91	48·49	88·38
Electrical apparatus and supplies	1952	38·8	38·0	38·6	81·92	42·95	70·83
	1953	38·8	37·9	38·6	87·17	45·04	75·07
Non-metallic mineral products	1952	39·0	36·8	38·4	83·48	41·15	71·45
	1953	39·9	37·1	39·2	85·84	43·36	74·31
Products of petroleum and coal	1952	37·0	35·9	36·7	108·63	51·57	95·23
	1953	37·5	36·2	37·2	111·87	52·95	98·27
Chemical products	1952	38·7	37·9	38·4	84·46	42·95	71·48
	1953	38·5	37·7	38·3	88·12	44·90	74·59
Miscellaneous manufacturing industries.	1952	39·5	35·9	38·3	80·66	40·57	66·57
	1953	39·4	37·8	38·9	84·11	42·08	69·21
Averages, Durable Goods	**1952**	**40·4**	**38·2**	**39·8**	**84·00**	**42·11**	**73·29**
	1953	**39·8**	**38·1**	**39·3**	**87·56**	**43·99**	**76·23**
Averages, Non-durable Goods	**1952**	**39·5**	**37·9**	**39·0**	**81·22**	**40·63**	**68·42**
	1953	**39·3**	**37·7**	**38·8**	**85·28**	**42·48**	**71·66**
Averages, Manufacturing Industries.	**1952**	**39·9**	**38·1**	**39·4**	**82·60**	**41·26**	**70·75**
	1953	**39·5**	**37·9**	**39·0**	**86·43**	**43·13**	**73·87**

13.—Provincial Distribution of Wage-Earners and Salaried Employees, classified by Sex and Earnings in the Last Week of October, 1950 and 1953

Sex and Earnings Group	Newfoundland		Nova Scotia		New Brunswick		Quebec		Ontario		Manitoba		Saskatchewan		Alberta		British Columbia		Total	
	1950	1953	1950	1953	1950	1953	1950	1953	1950	1953	1950	1953	1950	1953	1950	1953	1950	1953	1950	1953
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Male Wage-Earners—																				
Under $10	..	2	1	1	2	1	1	--	1	--	1	1	2	1	1	1	1	--	1	1
$10 - $19	..	6	3	2	5	2	3	1	2	--	2	--	2	2	2	--	2	2	2	2
$20 - $29	..	7	14	6	12	7	8	4	3	2	5	2	5	2	4	2	2	2	5	2
$30 - $39	..	9	22	12	25	14	18	9	11	4	18	6	21	5	16	3	6	2	14	5
$40 - $49	..	14	27	19	19	18	27	16	25	10	29	15	38	16	36	14	23	5	26	12
$50 - $59	..	14	20	24	20	20	23	22	28	20	32	27	21	30	29	25	41	13	28	21
$60 - $69	..	14	8	25	9	18	11	23	17	29	9	31	9	23	8	29	15	35	14	27
$70 - $79	..	12	3	6	5	9	5	12	8	18	3	10	2	11	3	15	6	22	6	16
$80 - $89	..	9	1	3	2	5	2	6	3	9	1	4	--	7	1	7	2	9	2	7
$90 - $99	..	5	1	1	1	3	1	3	1	4	--	2	--	2	--	2	1	5	1	3
$100 or over	..	8	--	1	--	3	1	4	1	4	--	2	--	1	--	2	1	5	1	4
Employees Reported....No.	..	**7,112**	**17,300**	**20,008**	**12,249**	**12,887**	**198,571**	**218,972**	**334,065**	**351,646**	**22,217**	**23,231**	**4,939**	**5,186**	**13,342**	**15,968**	**54,808**	**53,656**	**663,836**	**709,180**
Female Wage-Earners—																				
Under $10	..	6	7	5	11	14	3	3	3	2	3	3	6	4	2	2	3	3	4	3
$10 - $19	..	51	43	30	28	19	21	13	11	6	17	10	9	6	9	6	11	7	16	9
$20 - $29	..	31	38	45	32	25	37	30	33	20	46	34	35	15	35	22	32	18	35	26
$30 - $39	..	11	9	14	20	28	27	27	34	29	23	30	32	27	34	25	37	25	30	28
$40 - $49	..	1	3	6	8	10	9	16	15	25	8	15	18	28	19	22	14	25	12	20
$50 - $59	..	—	--	--	1	3	3	7	3	13	2	6	—	16	1	19	3	16	3	10
$60 - $69	..	—	—	--	--	1	--	3	1	4	1	1	--	4	--	3	--	5	--	3
$70 - $79	..	—	—	—	--	--	--	1	--	1	--	1	—	--	--	1	--	1	--	1
$80 - $89	..	—	—	--	—	--	--	--	--	--	--	--	—	--	—	--	--	--	—	--
$90 - $99	..	—	—	—	—	—	--	--	--	--	--	--	—	—	—	--	—	--	—	--
$100 or over	..	—	—	—	—	—	--	--	--	--	--	--	—	—	—	—	—	--	—	--
Employees Reported..No.	..	**653**	**2,973**	**3,011**	**2,758**	**2,502**	**80,221**	**80,078**	**90,380**	**92,211**	**6,294**	**6,182**	**644**	**665**	**2,122**	**2,580**	**7,221**	**6,769**	**193,639**	**194,829**
Male Salaried Employees—																				
Under $10	..	--	--	--	--	--	--	--	--	--	--	--	—	--	--	--	--	--	--	--
$10 - $19	..	1	1	--	1	1	1	--	--	--	1	--	--	--	2	1	1	--	1	--
$20 - $29	..	7	5	2	8	4	6	3	3	1	5	2	6	2	5	2	2	1	5	2
$30 - $39	..	8	12	7	15	9	10	5	7	3	12	5	13	6	9	4	6	2	8	3

$40 - $49	..	12	17	15	16	15	15	8	13	5	18	11	19	12	17	8	13	5	13	7
$50 - $59	..	11	20	15	20	12	18	12	19	10	20	16	23	17	20	13	19	8	19	11
$60 - $69	..	10	19	16	14	14	16	15	18	15	15	17	16	18	18	16	19	13	17	15
$70 - $79	..	12	8	12	9	13	10	13	13	14	12	13	9	14	12	16	13	14	12	14
$80 - $89	..	10	7	12	5	8	7	11	9	14	5	11	4	10	6	12	10	16	8	13
$90 - $99	..	6	4	6	4	8	4	9	5	11	3	8	4	8	3	10	6	13	5	10
$100 or over	..	23	7	15	8	16	13	24	13	7	9	17	6	13	8	18	11	28	12	25
Employees Reported..No.	..	**1,594**	**2,003**	**2,638**	**1,431**	**1,741**	**41,600**	**53,426**	**72,206**	**93,594**	**4,384**	**5,178**	**1,237**	**1,316**	**2,909**	**3,850**	**8,238**	**9,363**	**135,418**	**172,852**
Female Salaried Employees-																				
Under $10	..	5	--	--	1	1	--	--	1	--	--	--	--	1	1	--	1	--	1	--
$10 - $19	..	11	7	3	10	3	6	3	3	2	3	1	1	--	3	1	3	1	4	2
$20 - $29	..	23	47	25	49	29	27	12	26	5	42	18	36	7	32	7	23	7	27	9
$30 - $39	..	23	37	42	30	39	39	28	45	29	39	42	49	41	47	33	47	31	43	30
$40 - $49	..	25	7	21	8	19	20	31	20	36	12	24	11	38	13	38	19	35	19	34
$50 - $59	..	8	1	7	2	6	6	17	4	19	3	11	2	9	3	16	5	17	5	17
$60 - $69	..	3	1	2	--	2	2	6	1	6	1	3	1	3	1	3	1	6	1	5
$70 - $79	..	2	—	--	—	1	--	2	--	2	--	1	—	1	--	2	1	2	—	2
$80 - $89	..	—	—	--	—	--	--	1	--	1	--	--	—	--	—	--	--	1	—	1
$90 - $99	..	—	—	—	—	--	--	--	--	--	--	—	—	—	—	—	--	--	--	--
$100 or over	..	--	—	—	--	--	--	--	--	--	--	—	—	—	—	--	--	--	--	--
Employees Reported. No.	..	**445**	**742**	**887**	**613**	**661**	**17.609**	**21.247**	**33,526**	**40,456**	**1,620**	**1,846**	**594**	**645**	**974**	**1,341**	**2,878**	**3,058**	**59,018**	**70,661**

14.—Proportions of Women Employees and Proportions of their Average Earnings to Men's Earnings for the Last Week of October, 1952 and 1953

(As reported by manufacturers usually employing 15 or more persons)

Province and Group	Wage-Earners				Salaried Employees			
	Proportion of Women		Proportion of Women's Wages to Men's		Proportion of Women		Proportion of Women's Salaries to Men's	
	1952	1953	1952	1953	1952	1953	1952	1953
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Newfoundland	11·1	8·4	33·4	33·3	22·2	21·8	44·1	44·1
Nova Scotia	13·2	13·1	47·4	44·1	24·4	25·2	50·7	49·3
New Brunswick	16·9	16·3	56·4	48·7	26·8	27·5	49·6	48·0
Quebec	27·4	26·8	55·4	54·7	28·0	28·5	50·7	50·3
Ontario	19·9	20·8	57·8	58·1	30·0	30·2	49·2	49·5
Manitoba	21·5	21·0	57·9	54·0	26·2	26·3	50·6	49·7
Saskatchewan	12·0	11·4	64·2	64·1	31·4	32·9	56·7	56·0
Alberta	14·4	13·9	62·6	62·4	26·3	25·8	52·8	52·8
British Columbia	11·0	11·2	56·8	56·2	23·9	24·6	49·6	48·9
Canada[1]	**21·4**	**21·6**	**56·2**	**55·9**	**28·7**	**29·0**	**50·0**	**49·9**
Durable goods manufacturing	7·3	8·2	67·3	68·2	25·6	26·0	50·1	50·2
Non-durable goods manufacturing	35·5	35·0	55·5	54·4	31·5	31·8	50·0	49·8

[1] Includes Prince Edward Island and the Territories.

Section 4.—Wage Rates, Hours and Working Conditions for Various Classes of Labour

Statistics of rates of wages and hours of labour have been collected for many years by the Federal Department of Labour and are published monthly in the *Labour Gazette* and in annual reports.* The first report was issued in 1921 but the records begin in the year 1901. The index numbers show the general movement of wage rates for the main industrial groups as well as for individual industries, but these cannot be used to compare wage rates in one industry with those in another. The statistics are average straight-time wage rates or average straight-time piecework earnings and do not include overtime or other premium payments. The figures do include, however, incentive or production bonus payments as well as cost-of-living bonuses where reported.

Tables **15** and **16** show the index numbers of wage rates by main industrial groups and by industries. From 1930 to 1933, the trend in wage rates was downward but increases have been general each year since that time. During the period 1940-53, the general average index rose from 103·9 to 272·7.

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* More detailed information is given in the Department of Labour annual publication, *Wage Rates, Salaries and Hours of Labour in Canada.*

15.—Index Numbers of Wage Rates for certain Main Industrial Groups, 1945-53

(1939=100)

Note.—Figures back to 1911 may be obtained from the Department of Labour publication, *Wage Rates, Salaries and Hours of Labour in Canada, 1952.* Figures for 1921-44 are given in the 1947 Year Book, p. 650.

Year	Logging	Coal Mining	Metal Mining	Manufacturing	Construction	Water Transportation	Steam Railways	Electric Railways	Telephones	Laundries	General Average
1945.....	153·3	146·2	128·2	146·5	131·1	144·6	125·5	126·6	125·6	135·4	141·8
1946.....	167·4	146·7	135·7	161·5	143·9	162·3	142·3	139·5	125·2	147·5	155·2
1947.....	195·1	166·7	157·7	183·3	155·0	183·8	142·3	162·3	132·2	170·5	173·7
1948.....	218·8	192·9	173·1	205·9	176·3	213·5	170·2	175·0	140·4	183·0	195·8
1949.....	216·2	196·1	180·8	217·9	184·2	213·8	170·2	179·0	151·5	195·0	204·6
1950.....	213·9	200·7	192·0	230·7	194·0	236·3	179·2	192·1	158·9	209·0	215·9
1951.....	246·2	217·9	222·5	261·6	217·2	256·0	207·4	215·2	175·8	222·0	243·6
1952.....	293·8	240·6	237·1	277·6	235·2	281·6	...	...	...	239·6	263·3
1953.....	298·8	240·6	240·9	289·3	249·1	292·0	...	...	...	251·6	272·7

16.—Index Numbers of Wage Rates, by Industry, 1949-53

(1939=100)

Industry	1949	1950	1951	1952	1953p
Logging	**216·2**	**213·9**	**246·2**	**293·8**	**298·8**
Eastern Canada	210·1	200·5	229·7	287·4	291·1
British Columbia, coastal	239·2	264·2	308·5	317·7	327·8
Mining	**187·6**	**195·9**	**220·4**	**238·7**	**240·8**
Coal	196·1	200·7	217·9	240·6	240·6
Metal	180·8	192·0	222·5	237·1	240·9
Manufacturing	**217·9**	**230·7**	**261·6**	**277·6**	**289·3**
Primary textile products	243·3	256·0	286·4	304·4	316·4
Cotton yarn and broad woven goods	248·6	262·0	288·1	312·4	315·3
Woollen and worsted yarn and woven goods	258·6	273·0	305·5	323·4	337·2
Hosiery and knitted goods	230·3	243·6	274·2	288·9	308·9
Rayon, nylon and silk textiles	248·4	256·2	294·2	305·7	316·4
Clothing	212·0	217·3	236·2	252·3	261·1
Men's and boys' suits and overcoats	207·0	216·0	241·5	257·3	267·8
Work clothing	205·8	228·7	244·6	260·8	260·4
Women's and misses' coats and suits	210·8	203·8	204·2	226·9	227·7
Dresses	213·4	213·3	223·9	241·9	247·5
Shirts	228·0	230·8	271·1	277·6	304·5
Rubber products	217·6	228·8	269·3	277·0	293·3
Pulp and paper	194·4	206·1	248·1	252·9	...
Pulp	216·5	227·2	275·3	283·0	...
Newsprint	175·6	183·5	220·4	224·7	...
Paper, other than newsprint	190·5	205·4	244·0	244·0	...
Paper boxes and containers	223·4	234·8	259·7	275·7	286·2
Printing and publishing	173·9	188·1	204·9	227·6	241·7
Daily newspapers	164·3	178·6	195·0	216·8	232·8
Job printing	188·3	202·3	219·8	243·8	255·0
Wood products	238·8	257·6	293·2	307·8	314·2
Sawmills	253·0	274·0	318·1	333·3	336·1
Sash and door, and planing mills	197·5	216·9	237·7	253·0	262·4
Wooden furniture	228·3	239·0	259·3	271·1	287·4

16.—Index Numbers of Wage Rates, by Industry, 1949-53—concluded

Industry	1949	1950	1951	1952	1953P
Manufacturing—concluded					
Edible plant products	205·4	217·6	238·9	256·5	272·2
Flour mills	201·9	214·7	242·5	257·8	279·4
Bread and other bakery products	202·5	213·9	232·7	250·9	264·1
Biscuits and crackers	233·8	245·0	272·1	291·0	306·8
Confectionery	192·5	208·3	229·1	245·1	266·3
Fur products	206·6	215·2	220·5	228·7	242·5
Leather products	228·1	235·4	260·8	279·0	295·3
Leather tanneries	246·9	260·6	292·4	301·4	322·8
Boots and shoes	223·4	229·0	252·8	273·3	288·3
Slaughtering and meat packing	231·3	245·2	289·4	299·0	314·5
Iron and steel products	212·3	226·0	260·6	277·2	...
Primary iron and steel	239·6	255·1	298·3	317·6	330·6
Iron castings and machine-shop products	224·2	241·0	268·7	294·5	...
Machinery	209·4	244·9	255·0	269·0	284·9
Aircraft and parts	181·8	192·9	212·1	227·7	241·0
Steel shipbuilding	181·5	185·6	220·8	229·6	239·3
Motor-vehicles	165·9	174·3	191·9	207·6	214·4
Motor-vehicle parts and accessories	225·1	239·1	283·8	300·5	310·2
Heating and cooking apparatus	234·2	251·1	276·1	296·1	312·5
Agricultural implements	242·5	268·2	321·0	332·6	336·7
Sheet-metal products	220·0	232·1	276·9	299·5	310·5
Tobacco products	253·9	281·8	340·8	351·0	378·4
Beverages (malt liquors)	199·7	210·4	236·5	267·4	300·2
Electric light and power	186·4	199·7	222·8	248·6	271·1
Electrical apparatus and supplies	236·5	253·0	281·6	298·5	...
Construction	**184·2**	**194·0**	**217·2**	**235·2**	**249·1**
Transportation and Communications	**175·9**	**187·3**	**212·4**	**237·2**	**240·5**
Transportation	179·1	191·0	217·2	242·6	...
Water transportation (inland and coastal)	213·8	236·3	256·0	281·6	292·0
Steam railways	170·2	179·2	207·4	233·4	...
Urban and suburban transportation systems	179·0	192·1	215·2	233·5	...
Communication—telephone	151·5	158·9	175·8	196·0	...
Service-Laundries	**195·0**	**209·0**	**222·0**	**239·6**	**251·6**
General Averages	**204·6**	**215·9**	**243·6**	**263·3**	**272·7**

17.—Average Hourly Wage Rates for Selected Occupations in Manufacturing, by Province, 1953

Occupation	Atlantic Provinces	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	$	$	$	$	$	$	$
Newsprint—							
Machine tender	2·95	2·84	2·85	3·04	—	—	2·97
Roll-finisher	1·50	1·48	1·47	1·47	—	—	1·57
Sawmills—							
Lumber grader	0·89	0·94	1·16	1·27	—	1·02	1·67
Edgerman	0·89	0·97	1·15	1·31	—	1·38	1·72
Meat Products—							
Butcher	—	1·45	1·46	1·69	1·52	1·67	1·62
Truck-driver	—	1·59	1·49	1·58	1·51	1·59	1·61
Machinery—							
Machinist	—	1·40	1·54	1·48	1·50	1·54	1·91
Moulder	—	1·50	1·63	1·32	—	—	1·89
Woollen Yarn and Cloth—							
Spinner, male	0·94	1·03	1·19	1·08	—	—	—
Weaver, female	0·61	1·03	0·99	0·68	—	—	0·79

18.—Average Hourly Wage Rates for Selected Occupations in Certain Cities, 1953

Industry and Occupation	Halifax	Montreal	Toronto	Winnipeg	Vancouver
	$	$	$	$	$
Construction—					
Bricklayer and mason	1·81	2·00	2·35	2·10	2·32
Carpenter	1·56	1·80	2·20	1·90	2·17
Electrician	1·66	1·85	2·33	1·90	2·30
Painter	1·37	1·70	1·85	1·65	2·07
Plasterer	1·70	2·00	2·25	2·10	2·25
Plumber	1·65	2·00	2·30	2·00	2·25
Sheet-metal worker	1·47	1·80	2·25	1·75	2·25
Labourer	1·10	1·25	1·20	1·05	1·55
Manufacturing—					
Unskilled factory labour, male	1·04	1·21	1·28	1·22	1·44
Transportation (Urban and suburban)—					
One-man car and bus operator[1]	1·38	1·40	1·51	1·50	1·59
Body repairman, bus	—	1·44	1·61	1·58	1·70
Repairman, street car	1·42	1·34	1·57	1·57	1·62
Electrician	1·55	1·41	1·58	1·60	1·70
Labour	1·23	1·10	1·38	1·17	1·39
Printing and Publishing—					
Compositor—					
News	1·92	2·38	2·67	1·81	2·35
Job	1·30	1·95	2·02	1·82	2·10
Pressman—					
News	1·84	2·30	2·67	1·75	2·35
Job, cylinder	1·14	1·92	2·04	1·77	2·09
Bindery girl	0·56	0·95	1·05	0·91	1·24

[1] Maximum rates based on length of service. Two-man car operators receive 7 cents less at Montreal and Vancouver, 5 cents less at Toronto and 6 cents less at Winnipeg.

19.—Average Standard or Normal Hours of Labour per Week for Male Employees in Selected Industries, by Province, 1949-53

Industry and Year		Atlantic Provinces[1]	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
		hrs.	hrs.	hrs.	hrs.	hrs.	hrs.	hrs.
Work clothing	1949	43·5	45·2	41·4	41·2	—	40·0	41·7
	1950	43·5	44·4	41·1	41·0	—	40·0	40·0
	1951	43·5	44·6	41·0	41·1	—	40·0	40·4
	1952	43·6	45·0	41·0	40·0	—	40·0	42·7
	1953	43·8	43·6	41·1	40·4	—	40·0	40·0
Newsprint	1949	48·0	48·0	48·0	—	—	—	44·0
	1950[2]	48·1	48·4	47·9	48·0	—	—	43·4
	1951[2]	48·2	48·5	44·9	40·0	—	—	41·7
	1952[2]	47·0	48·2	42·8	40·0	—	—	40·0
	1953[2]	44·2	46·4	41·3	—	—	—	40·0
Wood products	1949	51·6	53·4	46·5	46·5	45·7	46·5	40·6
	1950	51·9	53·0	46·9	46·0	44·6	46·3	40·7
	1951	50·7	52·4	46·4	45·6	44·2	46·6	40·6
	1952	50·4	51·7	46·2	44·2	44·0	45·7	40·6
	1953	49·9	50·7	45·7	45·3	45·4	46·1	40·4
Meat products	1949	44·0	45·8	44·4	44·4	44·0	44·4	44·0
	1950	40·5	44·7	42·6	41·6	41·8	41·5	41·4
	1951	40·6	44·2	42·3	41·5	41·8	41·4	40·9
	1952	40·8	42·5	41·6	40·1	40·6	40·1	40·0
	1953	41·4	41·7	41·8	40·1	40·4	40·0	40·0
Iron and its products	1949	44·8	44·9	43·3	45·3	44·1	41·8	40·1
	1950	44·5	45·2	42·4	44·9	43·9	42·4	40·1
	1951	41·3	45·0	41·9	44·2	44·0	42·6	40·1
	1952	41·7	44·8	41·4	43·8	44·0	43·1	40·1
	1953	41·0	44·3	41·4	44·3	44·0	41·7	40·8
Woollen yarn and cloth	1949	47·5	47·9	45·7	45·0	45·0	45·0	45·0
	1950	48·5	46·5	46·1	45·2	45·2	45·2	45·2
	1951	46·0	48·1	45·4	45·6	45·6	45·6	45·6
	1952	46·1	47·5	45·1	45·3	45·3	45·3	45·3
	1953	46·3	46·6	45·7	42·2	—	—	42·2

[1] Exclusive of Newfoundland.
[2] Data shown apply to pulp and paper as a whole.

20.—Summary of Working Conditions of Plant Employees in Manufacturing Industries, as at Oct. 1, 1949-51, and Apr. 1, 1953

Source: Annual Survey of Working Conditions, Economics and Research Branch, Department of Labour.

Item	Percentage of Plant Employees			
	Apr. 1, 1953	Oct. 1, 1951	Oct. 1, 1950	Oct. 1, 1949
Plant Coverage.....No.	802,000	787,000	735,000	722,000
Standard Weekly Hours—				
40 and under	43·3	35·8	29·4	25·1
Over 40 and under 44	15·3	13·4	9·5	6·6
44	10·1	11·5	13·5	16·7
45	15·4	16·7	18·8	20·9
Over 45 and under 48	2·0	2·3	3·1	3·8
48	9·6	14·4	19·5	20·0
Over 48	4·3	5·9	6·2	6·9
Employees on a 5-day week	78·5	69·7	64·6	61·0
Premium Rates—				
Employees in establishments where higher than straight-time rates are paid after daily or weekly hours	93·4	92·1	90·8	90·6
Employees in establishments where time and one-half is paid after daily or weekly hours	92·2	90·2	89·2	88·0
Shift Differentials—				
Employees in establishments where shift work is performed	71·0	65·2	64·4	—
Employees in establishments where shift differentials are paid	66·2	—	—	—
Cost-of-Living Bonus or Cost-of-Living Wage Adjustments—				
Employees in establishments reporting a cost-of-living bonus or cost-of-living wage adjustment	32·0[1]	34·0	18·1	—
Production or Incentive Bonus—				
Employees in establishments reporting a production or incentive bonus	28·0[1]	26·0	27·9	—
Paid Statutory Holidays—				
Employees receiving paid statutory holidays	94·7	89·3	87·1	84·9
Employees being paid for the following number of statutory holidays—				
1 to 5	17·0	19·4	21·1	24·4
6	14·5	15·5	18·9	20·8
7	12·6	9·9	10·7	7·4
8	41·4	37·8	30·6	27·4
More than 8	9·2	6·7	5·8	4·9
Vacations with Pay—				
Eligible for at least one week with pay	99·3	99·1	99·2	99·0
One week with pay	91·1	91·8	91·1	91·7
After 1 year or less	87·3	89·3	89·2	89·5
Service not specified	3·8	2·5	1·9	2·2
Eligible for two weeks with pay	92·6	89·2	84·9	81·0
Two weeks with pay after—				
1 year or less	14·9	14·2	12·3	10·2
2 years	9·6	9·3	8·3	6·6
3 years	22·5	16·2	11·5	6·4
5 years	40·4	46·2	48·6	54·8
Other	5·2	3·3	4·2	3·0
Eligible for three weeks with pay	50·8	45·5	39·3	30·4
Three weeks with pay after—				
15 years	28·8	19·5	14·3	4·2
20 years	10·9	12·1	8·1	10·4
Other periods	11·1	13·9	16·9	15·8
Eligible for four weeks with pay	4·0	2·3	2·3	0·5
Four weeks with pay after—				
25 years	3·3	2·0	2·2	0·5
Other	0·7	0·3	0·1	[2]
Other vacation periods	0·9	1·1	0·7	0·3

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[1] Oct. 1, 1952. [2] Less than 0·1 p.c.

20.—Summary of Working Conditions of Plant Employees in Manufacturing Industries, as at Oct. 1, 1949-51, and Apr. 1, 1953—concluded

Item	Percentage of Plant Employees			
	Apr. 1, 1953	Oct. 1, 1951	Oct. 1, 1950	Oct. 1, 1949
Vacations with Pay—concluded				
Shut-down for Vacation—				
Employees in establishments reporting a shut-down period	61·5	56·0	58·0	56·0
Employees in establishments reporting a shut-down period of 2 weeks	47·6	41·0	39·0	33·4
Minimum Call Pay—				
Employees in establishments reporting minimum call pay				
During regular hours	—	51·8	—	—
Outside regular hours	—	53·5	—	—
Rest Periods—				
Employees in establishments reporting rest periods	—	—	60·7	—
Employees in establishments receiving 2 periods of 10 minutes each	—	—	38·9	—
Wash-up Periods—				
Employees in establishments reporting wash-up periods	—	—	45·2	—
Employees in establishments receiving 2 periods of 5 minutes each	—	—	19·8	—
Sick Leave—				
Employees in establishments reporting a provision for sick leave	12·7	—	17·5	—
Group Sickness or Accident Insurance Plan—				
Employees in establishments reporting a sickness or accident insurance plan	—	—	71·2	—

21.—Summary of Working Conditions of Office Employees in Manufacturing Industries, as at Oct. 1, 1949-51, and Apr. 1, 1953

Source: Annual Survey of Working Conditions, Economics and Research Branch, Department of Labour.

Item	Percentage of Office Employees			
	Apr. 1, 1953	Oct. 1, 1951	Oct. 1, 1950	Oct. 1, 1949
Plant Coverage ... No.	183,000	160,000	138,000	133,000
Standard Weekly Hours—				
Under 37½	19·4	20·9	20·3	16·8
37½	30·1	28·5	26·5	29·0
Over 37½ and under 40	19·1	17·3	15·0	17·0
40	21·2	20·5	21·7	19·1
Over 40	10·2	12·8	16·5	18·1
Employees on a 5-day week	84·1	75·9	69·7	67·5
Compensation for Overtime Work—				
Employees in establishments reporting—				
Compensating time off	11·8	—	—	—
Remuneration at straight-time rates	21·4	14·6	12·0	—
Remuneration at higher than straight-time rates	21·1	14·7	11·2	—
Meal allowance[1]	41·4	—	47·9	—
Other provisions	2·1	—	—	—

For footnote, *see* end of table.

21.—Summary of Working Conditions of Office Employees in Manufacturing Industries, as at Oct. 1, 1949-51 and Apr. 1, 1953—concluded

Item	Percentage of Office Employees			
	Apr. 1, 1953	Oct. 1, 1951	Oct. 1, 1950	Oct. 1, 1949
Cost-of-Living Bonus or Cost-of-Living Wage Adjustments—				
Employees in establishments reporting a cost-of-living bonus or cost-of-living wage adjustment	34·9[2]	31·6	18·7	—
Paid Statutory Holidays—				
Employees in establishments providing paid statutory holidays	99·5	99·1	98·4	96·0
Employees in establishments where the following number of statutory holidays are paid for—				
1 to 6	6·9	9·9	10·6	11·9
7	12·2	13·2	15·2	14·5
8	57·4	57·2	53·7	52·7
9	16·1	11·3	12·0	10·9
More than 9	6·9	7·5	6·9	6·0
Vacations with Pay—				
Employees in establishments providing at least one week with pay	99·7	99·7	99·2	99·5
One week with pay—				
After 1 year or less	56·1	42·8	59·2	53·7
Service not specified	6·8	3·5	1·7	8·8
Employees in establishments providing two weeks with pay	97·7	96·9	94·9	96·9
After: 1 year	88·5	88·2	86·0	85·2
2 years	4·6	4·2	4·9	5·1
3 years	0·7	0·8	0·6	0·3
5 years	1·9	1·7	2·1	2·7
Others	2·0	2·0	1·3	3·6
Employees in establishments providing three weeks with pay	60·6	54·6	48·3	42·0
After: 10 years or less	4·0	4·1	3·2	2·9
15 years	32·1	23·1	16·7	7·4
20 years	14·5	14·7	11·8	10·8
Other	10·0	12·7	16·6	20·9
Employees in establishments providing four weeks with pay	4·4	2·5	2·1	0·7
After: 25 years	3·2	2·1	1·9	0·7
Other	1·2	0·4	0·2	[3]
Employees in establishments providing other vacation periods	0·1	0·1	0·1	0·8
Sick Leave—				
Employees in establishments reporting a provision for sick leave	93·7	—	93·2	—
Group Sickness or Accident Insurance Plan—				
Employees in establishments reporting a group sickness or accident insurance plan	—	—	64·7	—
Group Life Insurance—				
Employees in establishments reporting group life insurance	—	—	82·3	—
Pension Plan—				
Employees in establishments reporting a pension plan	64·3	64·1	—	—

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[1] Meal allowances are sometimes reported as given in addition to other types of overtime compensation; in other cases as the sole type of overtime compensation. [2] Oct. 1, 1952. [3] Less than 0·1 p.c.

Wages of Farm Labour.—Farm wage rates have been increasing steadily during the past few years. In 1952 they were, almost without exception, up from the level of 1951 and the trend continued in 1953. In the Western Provinces and Ontario the increase was quite evident in the latest year but in the Maritimes and Quebec the rates showed a general levelling-off or a slight decline.

The information on farm wages is provided by volunteer farm correspondents located in all provinces except Newfoundland.

22.—Average Daily and Monthly Wages of Male Farm Help, as at Jan. 15, May 15 and Aug. 15, 1950-53

NOTE.—Figures for 1940-42 are given in the 1943-44 Year Book, pp. 732-733; for 1943-46 in the 1947 edition, pp. 653-654; for 1947 and 1948 in the 1951 edition, pp. 703-704; and for 1949 in the 1952-53 edition, pp. 711-712.

Province and Year	January 15				May 15				August 15			
	Daily		Monthly		Daily		Monthly		Daily		Monthly	
	With Board	Without Board	With Board	Without Board	With Board	Without Board	With Board	Without Board	With Board	Without Board	With Board	Without Board
	$	$	$	$	$	$	$	$	$	$	$	$
Maritimes—												
1950	3·50	4·20	65·00	98·00	3·30	4·20	73·00	104·00	3·70	4·60	78·00	101·00
1951	3·80	4·60	74·00	108·00	4·00	4·90	90·00	116·00	4·40	5·30	89·00	118·00
1952	4·30	5·40	89·00	118·00	4·30	5·30	92·00	121·00	4·50	5·60	91·00	122·00
1953	4·30	5·20	86·00	114·00	4·30	5·30	87·00	115·00	4·60	5·50	85·00	118·00
Quebec—												
1950	3·30	4·20	71·00	97·00	3·50	4·40	76·00	102·00	3·80	4·80	80·00	109·00
1951	4·00	5·00	79·00	114·00	4·20	5·20	89·00	116·00	4·70	5·80	100·00	134·00
1952	4·70	5·70	96·00	129·00	4·60	5·70	95·00	132·00	5·10	6·20	101·00	136·00
1953	4·70	5·70	90·00	125·00	4·80	6·00	95·00	127·00	5·10	6·40	97·00	131·00
Ontario—												
1950	4·00	4·80	66·00	100·00	4·10	5·10	77·00	108·00	4·60	5·70	81·00	111·00
1951	4·30	5·40	77·00	113·00	4·70	5·70	85·00	120·00	5·20	6·40	89·00	124·00
1952	4·70	5·90	87·00	121·00	4·80	5·90	88·00	121·00	5·40	6·60	91·00	124·00
1953	4·90	6·20	83·00	119·00	5·10	6·30	90·00	123·00	5·60	7·10	93·00	128·00
Manitoba—												
1950	4·00	5·20	64·00	90·00	3·90	5·20	86·00	110·00	4·90	6·20	93·00	123·00
1951	3·90	5·20	69·00	102·00	4·80	6·00	96·00	129·00	5·90	7·20	104·00	141·00
1952	4·40	5·40	80·00	107·00	5·10	6·40	102·00	134·00	6·20	7·90	107·00	141·00
1953	4·50	5·50	76·00	108·00	5·30	6·90	105·00	140·00	6·00	8·10	110·00	141·00
Saskatchewan—												
1950	3·20	4·50	64·00	90·00	4·40	5·30	91·00	119·00	5·50	6·70	96·00	128·00
1951	3·90	4·80	70·00	103·00	4·80	5·80	101·00	133·00	6·30	7·40	109·00	141·00
1952	4·10	5·30	75·00	114·00	5·40	6·60	113·00	146·00	7·30	8·30	119·00	151·00
1953	4·70	6·10	81·00	117·00	6·00	7·50	122·00	148·00	6·60	8·10	124·00	152·00
Alberta—												
1950	3·60	4·60	78·00	102·00	4·30	5·30	92·00	123·00	5·20	6·10	97·00	132·00
1951	3·70	4·80	76·00	104·00	4·70	6·00	100·00	133·00	5·70	6·90	110·00	147·00
1952	4·50	5·50	91·00	125·00	5·70	6·90	112·00	145·00	7·00	8·10	118·00	155·00
1953	5·20	6·20	96·00	131·00	6·20	7·60	115·00	154·00	6·50	8·10	122·00	156·00
British Columbia—												
1950	5·00	5·40	77·00	115·00	4·70	6·00	90·00	120·00	5·30	6·20	98·00	135·00
1951	6·30	7·60	90·00	141·00	5·70	7·00	105·00	142·00	6·40	7·20	112·00	140·00
1952	6·60	7·90	92·00	146·00	5·90	7·20	107·00	152·00	6·40	7·40	112·00	145·00
1953	6·80	8·60	110·00	146·00	6·12	7·90	108·00	160·00	5·75	7·00	110·00	146·00
Totals—												
1950	**3·60**	**4·40**	**69·00**	**99·00**	**3·80**	**4·80**	**85·00**	**114·00**	**4·40**	**5·40**	**88·00**	**120·00**
1951	**4·10**	**5·10**	**75·00**	**110·00**	**4·40**	**5·40**	**95·00**	**127·00**	**5·20**	**6·30**	**101·00**	**135·00**
1952	**4·60**	**5·70**	**86·00**	**121·00**	**4·90**	**6·00**	**101·00**	**135·00**	**5·60**	**6·70**	**105·00**	**139·00**
1953	**4·70**	**5·80**	**87·00**	**122·00**	**5·00**	**6·20**	**105·00**	**138·00**	**5·50**	**6·80**	**107·00**	**140·00**

Section 5.—Unemployment Insurance

The Unemployment Insurance Act, which came into operation on July 1, 1941, applies to all employed persons except the following: workers in specified industries or occupations such as agriculture, fishing, Armed Forces, permanent public service of the Federal Government, provincial governments and municipal authorities, private domestic service, private-duty nursing; certain director-officers of corporations; workers on other than hourly, daily or piece rates if earning more than $4,800 per year and (except by consent of the Unemployment Insurance Commission) employees in a hospital or charitable institution not carried on for gain. All employees paid by the hour, day or on piece rate (including a milage rate) are insured regardless of amount of earnings, together with all employees who receive $4,800 or less per annum under weekly, monthly or yearly rates.

Unemployment Insurance Fund.—Employers and employees contribute to the Fund, the total paid by each group being equal. The Federal Government contributes an amount equal normally to one-fifth of the combined employer-employee contributions, reimburses the fund for certain types of supplementary benefit payments and assumes the cost of administration. From July 1, 1941, to Mar. 31, 1954, employers and employees contributed $1,241,276,310 to the Fund and the Federal Government added $248,262,044. Interest and profit on sale of securities amounted to $145,712,389, and fines of $182,460 made a total revenue of $1,635,433,203.

Benefits first became payable on Jan. 27, 1942, and from that date to Mar. 31, 1954, total benefit payments amounted to $754,159,070, leaving a balance of $881,274,133 in the Fund. Reserves of the Fund are invested in Government of Canada bonds and, as at Mar. 31, 1954, the par value of bonds held amounted to $880,424,000.

WEEKLY RATES OF CONTRIBUTION AND BENEFIT UNDER THE UNEMPLOYMENT INSURANCE ACT

Earnings	Weekly Contributions[1]		Value of Weekly Stamp[2]	Weekly Benefits[3]	
	By Employee	By Employer		Single Person	Person With One Dependant or More
	cts.	cts.	cts.	$	$
Less than $9·00	18	18	36	4·20	4·80
$ 9·00 to $14·99	24	24	48	6·00	7·50
$15·00 to $20·99	30	30	60	8·70	12·00
$21·00 to $26·99	36	36	72	10·80	15·00
$27·00 to $33·99	42	42	84	12·90	18·00
$34·00 to $47·99	48	48	96	15·00	21·00
$48·00 or more	54	54	108	17·10	24·00

[1] The daily rates of contribution in respect of each class is one-sixth of the weekly rates. [2] Unemployment insurance stamps combine both employer and employee contributions. [3] Rates calculated on the average daily contribution for the last 180 days in the two years preceding claim. The daily rate of benefit is one-sixth of the weekly benefit rate.

No benefit is payable during the first five days of unemployment in a benefit year. After that time, the duration of benefit is related to the employment and contribution history of the employee, the number of days' benefit being equal to one-fifth the number of contribution days during the previous five years, less one-third the number of benefit days in the previous three years. Insurance benefit is paid as a right on fulfilment of the following statutory conditions:—

> The payment of not less than 30 weekly (or 180 daily) contributions within two years while in insured employment; and the payment of at least 60 daily contributions within the immediately preceding 12 months, or 45 daily contributions within the immediately preceding 6 months. (These periods of two years, 12 months and 6 months may be extended under certain circumstances.)

Disqualifications for benefit include: loss of work owing to a labour dispute in which the contributor is participating or directly interested; unwillingness to accept suitable employment; being an inmate of any prison or an institution supported out of public funds; refusal to attend a course of instruction or training if directed to do so; residence outside Canada unless otherwise prescribed. Disqualification of a claimant for a period not exceeding six weeks may be made if an employee is discharged by reason of his own misconduct or leaves the employment voluntarily without just cause or refuses suitable employment.

Supplementary benefits at a slightly lower rate are payable to certain classes whose benefits have been exhausted or who are not entitled to ordinary benefit during the period Jan. 1 to Apr. 15 in each year.

Statistics of Unemployment Insurance.*—Benefits under the Unemployment Insurance Act first became payable late in January 1942, but no applications for benefit were received until early in February. Except for unusual periods, such as the months following the cessation of hostilities in Europe in the spring of 1945, monthly totals of claims received have shown a definite seasonal variation, rising in the late autumn and winter and falling again in the spring. Monthly averages of initial and renewal claims filed have been as follows: 1949, 77,821; 1950, 88,165; 1951, 95,130; 1952, 115,740 and 1953, 139,655.

Since September 1943, a record has also been maintained of the number of claimants on the live unemployment register on the last working day in each month. This provides a measure of recorded unemployment among insured persons on one day of each month. Monthly averages of ordinary claimants on the live register at the end of the month have been: 1949, 88,909; 1950, 165,304; 1951, 138,807; 1952, 180,775 and 1953, 208,410.

Monthly statistics on the operation of the Unemployment Insurance Act also provide data on the number of days that claimants on the live unemployment register at the end of each month have been continuously on the register, the number of claimants considered entitled and not entitled to benefit, chief reasons for non-entitlement, number of days and amount of benefit paid.

In addition to the monthly material on the operation of the Act, annual tabulations are published of the persons employed in insurable employment and of benefit years established and benefit years terminated. The data on the insured population shown in Table **23** are obtained from returns from the renewal of insurance books and contribution cards at Apr. 1. Included are those contributing in insured employment at that time and those on claim.

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* Statistics of unemployment insurance are compiled and published by the Unemployment Insurance Section, Labour and Prices Division, Dominion Bureau of Statistics, from material supplied by the Unemployment Insurance Commission. A more detailed analysis of these data, by province and sex, is available in DBS publications, *Annual Report on Benefit Years Established and Terminated Under the Unemployment Insurance Act* and the monthly *Statistical Report on the Operation of the Unemployment Insurance Act.*

The number of persons insured under the Unemployment Insurance Act, shown in Table **23**, was assumed to be those working in insurable employment as at Apr. 1, as indicated at that time from returns on those receiving insurance books and contribution cards.

Table **24** presents information on the persons who established benefit years and those benefit years terminating during the calendar years 1952 and 1953. A benefit year is established under the Unemployment Insurance Act when an insured person, upon becoming unemployed, submits a claim and fulfils the above-mentioned statutory conditions. Because of other provisions of the Act or because he may regain employment before he actually receives benefit, the setting up of a benefit year does not necessarily result in the receipt of benefit payments. When a benefit year is established it means merely that the claimant's right to receive benefit at a certain rate at any time during the succeeding twelve months is determined. Thus, of the 770,684 benefit years that terminated during 1953, 91,180 were paid no benefit.

The benefit year remains in existence either until the authorized benefit rights are exhausted or until 12 months have passed since the date of its establishment, whichever occurs first.

The amount of benefit paid on benefit years terminated, as presented in Table **24**, is secured by multiplying each daily rate of benefit by the number of days paid at that rate on the ledger cards representing benefit years upon which benefit was drawn. Benefit years terminated during 1952 and 1953 and benefit days paid on those benefit years are classified, in Table **25**, by duration of benefit paid.

Table **26** classifies benefit years terminated by daily rate of benefit authorized. The daily rate of benefit is determined by the amount of the daily average contribution paid on behalf of the claimant during the most recent 180 contribution days and by whether or not he has a dependant within the meaning of the Act.

Table **27** shows benefit years terminated and benefit days paid on them by age of claimant; and benefit years terminated by cause of termination and age of claimant. Benefit years terminated during 1953 and benefit days paid on them are classified by industry and age in Table **28** and by occupation for 1952 and 1953 in Table **29**.

23.—Persons Insured under the Unemployment Insurance Act, by Industrial Group and Sex, 1952 and 1953

Note.—These figures include only persons who exchanged an unemployment insurance book or were issued a book for the first time in April. They, therefore, represent an estimate of the number, based on a 10-p.c. sample, in insurable employment as at Apr. 1.

Industrial Group	1952		1953	
	Male	Female	Male	Female
	No.	No.	No.	No.
Agriculture	1,550	550	1,590	610
Forestry and logging	94,680	2,400	71,470	1,700
Fishing, hunting and trapping	330	40	320	—
Mining, Quarrying and Oil Wells—				
Metal mining	55,350	1,140	50,280	1,130
Fuels	30,410	740	23,470	720
Non-metal mining	7,070	130	8,260	150
Quarrying, clay and sand pits	2,540	40	2,490	50
Prospecting	3,270	520	3,840	520
Totals, Mining, Quarrying and Oil Wells	98,640	2,570	88,340	2,570

23.—Persons Insured under the Unemployment Insurance Act, by Industrial Group and Sex, 1952 and 1953—concluded

Industrial Group	1952		1953	
	Male	Female	Male	Female
	No.	No.	No.	No.
Manufacturing—				
Food and beverages	97,490	33,910	98,110	33,780
Tobacco and tobacco products	3,400	4,240	3,310	4,570
Rubber products	15,140	4,750	16,680	5,470
Leather products	16,880	12,380	18,490	13,670
Textile products (except clothing)	42,290	25,100	41,980	25,330
Clothing (textile and fur)	34,250	70,100	37,460	78,120
Wood products	83,560	8,160	87,810	8,710
Paper products	71,280	11,380	64,790	11,620
Printing, publishing and allied industries	34,870	14,750	35,200	15,440
Iron and steel products	158,860	17,550	164,440	19,380
Transportation equipment	127,970	10,420	148,180	13,420
Non-ferrous metal products	43,930	6,630	42,950	6,950
Electrical apparatus and supplies	46,920	16,170	52,040	21,150
Non-metallic mineral products	25,090	2,870	25,640	3,270
Products of petroleum and coal	10,700	980	10,670	960
Chemical products	35,760	11,600	32,490	11,780
Miscellaneous manufacturing industries	14,790	9,110	16,250	10,550
Totals, Manufacturing	863,180	260,100	896,490	284,170
Construction—				
General contractors	123,980	3,180	132,760	3,980
Special trade contractors (subcontractors)	55,640	2,320	60,310	2,820
Totals, Construction	179,620	5,500	193,070	6,800
Transportation, Storage and Communication—				
Transportation	271,130	15,720	267,740	15,880
Storage	10,760	1,180	11,120	1,610
Communication	17,450	29,610	16,710	30,800
Totals, Transportation, Storage and Communication	299,340	46,510	295,570	48,290
Public utility operation	30,310	3,860	30,180	4,130
Trade—				
Wholesale	110,480	34,770	108,670	35,260
Retail	186,820	153,870	194,610	156,100
Totals, Trade	297,300	188,640	303,280	191,360
Finance, insurance and real estate	42,940	64,070	43,670	67,360
Service—				
Community or public	13,030	14,950	13,150	16,580
Government	91,780	31,230	89,110	33,090
Recreation	9,390	5,890	9,640	5,990
Business	23,360	17,300	23,030	17,550
Personal	59,330	74,750	61,630	78,470
Totals, Service	196,890	144,120	196,560	151,680
Unspecified	21,970	6,460	6,840	2,050
Claimants	190,710	47,960	215,230	47,350
Totals, All Industries	**2,317,460**	**772,780**	**2,342,610**	**808,070**

24.—Persons Establishing Benefit Years, Benefit Years Terminated, Benefit Days Paid on Benefit Years Terminated and Amount of Benefit Paid on those Benefit Years, classified by Province, 1952 and 1953.

Province	1952				1953			
	Persons Establishing Benefit Years	Benefit Years Terminated	Benefit Days Paid on Benefit Years Terminated	Amount of Benefit Paid on Benefit Years Terminated[1]	Persons Establishing Benefit Years	Benefit Years Terminated	Benefit Days Paid on Benefit Years Terminated	Amount of Benefit Paid on Benefit Years Terminated[1]
	No.	No.	No.	$	No.	No.	No.	$
Newfoundland.....	17,322	13,270	705,399	1,966,429	22,418	18,908	1,133,424	3,663,564
P. E. Island.......	3,454	3,377	219,392	524,661	4,046	3,826	265,068	728,634
Nova Scotia......	35,277	29,682	1,681,982	4,381,072	44,472	38,418	2,280,650	6,829,767
New Brunswick...	32,834	26,465	1,475,896	3,881,433	36,424	35,988	2,262,366	6,839,860
Quebec...........	245,365	218,821	12,495,517	31,788,220	294,454	263,880	16,150,436	47,412,324
Ontario..........	228,447	211,042	10,816,962	28,383,808	259,792	233,528	12,066,924	35,816,470
Manitoba.........	30,095	29,402	1,869,359	4,797,560	34,852	31,612	2,098,940	6,032,049
Saskatchewan.....	14,883	14,844	866,873	2,235,157	17,432	15,472	940,270	2,777,865
Alberta...........	28,708	26,282	1,277,514	3,462,342	39,752	30,534	1,620,386	4,982,045
British Columbia..	94,663	87,234	4,902,308	13,813,019	98,968	98,518	5,841,724	18,507,090
Totals..........	**731,048**	**660,419**	**36,311,202**	**95,233,701**	**852,610**	**770,684**	**44,660,188**	**133,589,668**

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[1] These data are obtained from the daily rate of benefit authorized at the time the benefit year is established and the number of benefit days paid during the benefit year.

25.—Number of Benefit Years Terminated during 1952 and 1953, classified by Duration of Benefit Payment

Duration of Benefit Paid (days)	1952	1953	Duration of Benefit Paid (days)	1952	1953	Duration of Benefit Paid (days)	1952	1953
No.	No.	No.	No.	No.	No.	No.	No.	No.
"0"..........	92,038	91,180	105–109....	8,497	10,688	215–219....	1,139	1,294
1– 4........	26,039	28,086	110–114....	7,301	9,336	220–224....	1,055	1,164
5– 9........	30,837	32,042	115–119....	6,504	8,180	225–229....	986	1,178
10– 14........	27,032	28,680	120–124....	5,870	7,296	230–234....	1,024	1,144
15– 19........	24,673	27,952	125–129....	5,164	6,422	235–239....	957	984
20– 24........	23,575	26,598	130–134....	4,588	5,528	240–244....	907	1,020
25– 29........	22,837	25,544	135–139....	4,084	5,006	245–249....	915	1,038
30– 34........	22,027	25,048	140–144....	3,581	4,366	250–254....	822	912
35– 39........	40,899	45,934	145–149....	3,325	3,908	255–259....	802	904
40– 44........	30,160	35,368	150–154....	3,012	3,398	260–264....	793	892
45– 49........	28,942	35,108	155–159....	2,720	3,306	265–269....	855	1,008
50– 54........	27,442	34,304	160–164....	2,376	2,928	270–274....	827	992
55– 59........	25,879	33,094	165–169....	2,283	2,418	275–279....	770	938
60– 64........	24,456	30,628	170–174....	1,992	2,308	280–284....	788	978
65– 69........	22,172	28,356	175–179....	1,931	2,162	285–289....	827	1,074
70– 74........	19,561	25,830	180–184....	1,741	1,976	290–294....	862	1,056
75– 79........	17,675	23,310	185–189....	1,596	1,928	295–299....	1,009	1,110
80– 84........	15,552	21,096	190–194....	1,496	1,700	300 or over.	2,182	3,232
85– 89........	14,048	19,014	195–199....	1,367	1,660			
90– 94........	12,889	16,776	200–204....	1,311	1,590			
95– 99........	11,205	14,604	205–209....	1,234	1,388			
100–104........	9,742	12,394	210–214....	1,246	1,328	**Totals....**	**660,419**	**770,684**

26.—Benefit Years Terminated During 1952 and 1953, and Benefit Days Paid on those Benefit Years, classified by Daily Rate of Benefit Authorized and Dependency Status.

Daily Rate of Benefit and Dependency Status	1952		1953	
	Benefit Years Terminated	Benefit Days Paid	Benefit Years Terminated	Benefit Days Paid
	No.	No.	No.	No.
With Dependant—				
$0·80	45	3,345	76	4,502
$1·25	660	49,024	518	41,826
$1·70	3,039	211,888	1,022	73,118
$2·00	100	5,696	1,464	115,802
$2·15	9,297	628,868	2,818	184,420
$2·50	198	11,484	3,820	298,610
$2·60	30,683	1,873,775	9,576	584,544
$3·00	480	25,220	11,636	857,088
$3·05	160,152	8,672,414	51,520	2,840,358
$3·50	98,613	5,343,042	156,666	8,972,238
$4·00	1,818	103,289	129,192	8,103,686
Totals, With Dependant	**305,085**	**16,928,045**	**368,308**	**22,076,192**
Without Dependant—				
$0·70	376	20,912	314	20,430
$1·00	5,935	330,376	3,980	230,680
$1·35	29,625	1,635,195	10,630	504,346
$1·45	895	49,056	14,258	883,054
$1·70	52,411	2,929,569	19,414	937,558
$1·80	1,148	64,060	24,560	1,547,484
$2·05	71,026	3,958,071	29,454	1,473,208
$2·15	1,272	68,684	36,754	2,345,140
$2·40	138,410	7,311,891	61,628	2,928,998
$2·50	1,870	102,953	75,290	4,687,934
$2·70	51,048	2,838,708	49,548	2,372,304
$2·85	1,318	73,682	76,546	4,652,860
Totals, Without Dependant	**355,334**	**19,383,157**	**402,376**	**22,583,996**
Grand Totals	**660,419**	**36,311,202**	**770,684**	**44,660,188**

27.—Benefit Years Terminated during 1952 and 1953, Benefit Days Paid on those Benefit Years, Benefit Years Terminated by Cause, classified by Age of Claimant

Age Group	1952				1953			
	Benefit Years Terminated	Days Paid on Benefit Years Terminated	Benefit Years Terminated		Benefit Years Terminated	Days Paid on Benefit Years Terminated	Benefit Years Terminated	
			Lapsed	Exhausted			Lapsed	Exhausted
	No.	No.	No.	No.	No.	No.	No.	No.
Under 20 years	33,287	1,276,518	18,728	14,559	37,014	1,444,648	18,584	18,430
20 – 24 “	119,491	5,430,203	90,405	29,086	137,368	6,535,834	97,698	39,670
25 – 29 “	98,826	4,790,252	77,375	21,451	118,752	6,094,904	88,568	30,184
30 – 34 “	78,795	3,811,188	61,343	17,452	94,956	4,917,320	70,828	24,128
35 – 39 “	64,919	3,201,431	49,282	15,637	77,696	4,118,432	56,062	21,634
40 – 44 “	59,820	3,075,540	44,288	15,532	69,474	3,757,308	49,408	20,066
45 – 49 “	51,557	2,767,679	37,306	14,251	59,952	3,429,448	41,996	17,956
50 – 54 “	44,249	2,544,383	31,039	13,210	51,394	3,156,684	34,454	16,940
55 – 59 “	33,485	2,138,520	22,189	11,296	38,900	2,627,500	24,732	14,168
60 – 64 “	29,015	2,184,548	17,667	11,348	31,462	2,484,766	18,440	13,022
65 – 69 “	26,245	2,878,095	13,882	12,363	28,886	3,394,474	14,942	13,944
70 or over	14,831	1,882,022	6,993	7,838	16,704	2,245,920	7,606	9,098
Unspecified	5,899	330,823	4,217	1,682	8,126	452,950	5,678	2,448
Totals, All Ages	**660,419**	**36,311,202**	**474,714**	**185,705**	**770,684**	**44,660,188**	**528,996**	**241,688**

28.—Benefit Years Terminated during 1953 and Benefit Days Paid on those Benefit Years, classified by Industrial Group and Age of Claimant

Industrial Group	Benefit Years Terminated			Benefit Days Paid		
	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over
	No.	No.	No.	No.	No.	No.
Agriculture	934	2,318	328	45,234	143,252	23,406
Forestry and logging	22,400	61,030	6,038	1,077,990	3,262,120	414,206
Fishing, hunting and trapping	116	818	96	5,446	53,060	8,092
Mining, Quarrying and Oil Wells—						
Metal mining	1,568	5,366	598	74,114	347,010	72,918
Fuels	1,406	9,478	1,658	50,254	342,820	149,812
Non-metal mining	306	1,104	204	15,362	60,392	22,786
Quarrying, clay and sand pits	306	1,218	218	16,390	79,068	22,780
Prospecting	88	216	22	2,884	11,036	2,310
Totals, Mining, Quarrying and Oil Wells	3,674	17,382	2,700	159,004	840,326	270,606
Manufacturing—						
Food and beverages	9,780	22,072	3,602	439,142	1,276,926	404,776
Tobacco and tobacco products	714	1,494	140	39,636	89,506	16,834
Rubber products	1,552	3,416	228	52,538	115,476	25,122
Leather products	2,654	5,046	772	109,314	226,300	65,440
Textile products (except clothing)	7,680	13,888	1,294	360,850	658,644	149,380
Clothing (textile and fur)	9,010	24,212	2,438	367,838	1,160,090	201,762
Wood products	7,294	22,760	4,550	327,378	1,201,744	423,010
Paper products	4,372	11,862	1,406	201,028	575,760	186,934
Printing, publishing and allied industries	1,788	3,458	638	65,808	207,670	89,264
Iron and steel products	6,958	23,144	3,230	303,128	1,048,990	402,986
Transportation equipment	8,244	30,644	3,516	322,024	1,092,544	306,186
Non-ferrous metal products	1,258	3,404	356	56,536	183,724	51,728
Electrical apparatus and supplies	2,420	5,448	428	102,800	251,952	62,996
Non-metallic mineral products	1,952	4,506	632	84,368	225,882	80,322
Products of petroleum and coal	104	444	140	2,816	25,356	27,024
Chemical products	1,326	3,746	400	61,532	234,410	59,588
Miscellaneous manufacturing industries	1,830	3,492	424	76,748	174,888	48,080
Totals, Manufacturing	68,936	183,036	24,194	2,973,484	8,749,862	2,601,432
Construction—						
General contractors	16,496	79,160	12,170	850,804	4,686,188	995,848
Special trade contractors (subcontractors)	6,226	18,982	2,174	272,198	965,742	180,704
Totals, Construction	22,722	98,142	14,344	1,123,002	5,651,930	1,176,552
Transportation, Storage and Communication—						
Transportation	12,604	37,720	6,964	627,368	2,274,982	1,127,138
Storage	472	1,200	236	22,360	65,754	29,842
Communication	1,350	1,662	146	71,498	132,160	22,560
Totals, Transportation, Storage and Communication	14,426	40,582	7,346	721,226	2,472,896	1,179,540
Public utility operation	1,088	3,138	686	50,800	211,970	102,438
Trade—						
Wholesale	4,946	12,902	1,950	215,916	782,368	248,712
Retail	16,980	32,970	4,920	777,432	2,118,638	599,234
Totals, Trade	21,926	45,872	6,870	993,348	2,901,006	847,946

28.—Benefit Years Terminated during 1953 and Benefit Days Paid on those Benefit Years, classified by Industrial Group and Age of Claimant—concluded

Industrial Group	Benefit Years Terminated			Benefit Days Paid		
	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over	Under 25 Years of Age	25-59 Years of Age	60 Years of Age or Over
	No.	No.	No.	No.	No.	No.
Finance, insurance and real estate	2,346	3,868	904	93,248	262,202	140,338
Service—						
Community or public	888	4,286	1,372	35,028	281,496	155,206
Government	4,356	18,910	5,794	233,018	1,261,424	536,302
Recreation	920	2,706	906	42,198	176,590	83,208
Business	826	2,610	742	32,468	155,124	69,874
Personal	8,124	24,522	4,462	358,870	1,556,650	489,606
Totals, Service	15,114	53,034	13,276	701,582	3,431,284	1,334,196
Unspecified	700	1,904	270	36,118	121,688	26,408
Totals, All Industries[1]	**174,382**	**511,124**	**77,052**	**7,980,482**	**28,101,596**	**8,125,160**

[1] The total number of benefit years terminated was actually 770,684 because for 8,126 benefit years the age of claimant was unspecified; 452,950 benefit days were paid on these 8,126 benefit years, so that the total number of benefit days paid on benefit years terminated was 44,660,188.

29.—Benefit Years Terminated during 1952 and 1953 and Benefit Days Paid on those Benefit Years, classified by Occupation Group

Occupation Group	1952		1953	
	Benefit Years Terminated	Benefit Days Paid	Benefit Years Terminated	Benefit Days Paid
	No.	No.	No.	No.
Managerial	5,002	319,160	5,886	430,668
Professional	3,626	205,785	5,030	298,036
Clerical	43,430	2,581,870	50,906	3,217,318
Transportation	49,063	2,756,183	68,822	4,157,250
Communication	3,823	253,325	4,802	343,196
Commercial	34,567	2,106,898	37,292	2,305,376
Financial	274	12,517	352	21,000
Service (other than professional)	53,678	3,582,413	62,414	4,415,132
Personal (other than domestic)	*25,018*	*1,624,848*	*26,854*	*1,863,282*
Domestic	*20,470*	*1,292,633*	*24,888*	*1,658,876*
Protective	*7,102*	*599,676*	*9,330*	*808,772*
Other	*1,088*	*65,256*	*1,342*	*84,202*
Agricultural	2,657	160,929	3,486	214,806
Fishing, trapping, and logging	40,482	1,946,277	65,604	3,492,056
Fishing and trapping	*805*	*48,837*	*982*	*66,552*
Logging (including forestry)	*39,677*	*1,897,440*	*64,622*	*3,425,504*
Mining	11,492	517,859	18,482	958,778
Manufacturing and mechanical	168,807	8,243,547	162,972	8,064,692
Electric light and power production and stationary enginemen	9,845	571,703	12,854	830,910
Construction	73,690	4,183,165	88,980	5,235,060
Labourers	150,915	8,428,073	173,704	10,125,730
Unspecified	9,068	441,498	9,098	550,180
Totals, All Occupations	**660,419**	**36,311,202**	**770,684**	**44,660,188**

Employment Service.—The Unemployment Insurance Commission operates a free employment service under authority of the Unemployment Insurance Act, 1940. The public employment offices, which had functioned under a joint federal-provincial arrangement for more than two decades, were taken over by the

Commission on Aug. 1, 1941, and added offices were established in all provinces, except Quebec. The Commission established its own offices in Quebec and the provincial government thereupon reduced the number of its offices.

30.—Applications for Employment, Positions Offered and Placements Effected by Employment Offices, 1943-53, and by Province, 1950-53

Note.—Figures by provinces from 1920-49 are given in the corresponding table of previous Year Books, commencing with the 1926 edition. Totals for 1920-37 are given in the 1938 edition, p. 766; for 1938 in the 1939 edition, p. 802; and for 1939-42 in the 1951 edition, p. 686.

Year and Province	Applications Registered		Vacancies Notified		Placements Effected	
	Males	Females	Males	Females	Males	Females
	No.	No.	No.	No.	No.	No.
1943	1,681,411	1,008,211	2,002,153	1,034,447	1,239,900	704,126
1944	1,583,010	902,273	1,779,224	949,547	1,101,854	638,063
1945	1,855,036	661,948	1,733,362	687,886	1,095,641	397,940
1946	1,464,533	494,164	1,335,200	567,331	624,052	235,360
1947	1,189,646	439,577	1,060,134	476,643	549,376	220,473
1948	1,197,295	459,332	794,207	391,385	497,916	214,424
1949	1,295,690	494,956	652,853	373,837	464,363	219,816
1950	1,500,763	575,813	800,611	363,711	559,882	230,920
1951	1,541,208	623,467	943,773	387,795	655,933	262,305
1952	1,781,689	664,485	865,152	444,926	678,511	302,786
1953	1,980,918	754,358	822,852	466,310	661,167	332,239
Newfoundland.........1950	36,862	1,944	3,107	388	1,604	169
1951	27,359	1,735	3,472	563	2,175	295
1952	33,341	2,282	6,419	586	5,191	406
1953	39,421	2,669	2,551	628	2,980	433
Prince Edward Island..1950	8,492	3,337	4,868	2,262	4,283	1,678
1951	7,800	3,726	4,351	2,990	3,576	2,370
1952	8,780	4,298	4,942	3,612	4,091	2,750
1953	9,989	5,003	4,561	4,296	4,101	3,331
Nova Scotia...........1950	62,665	19,483	19,408	10,942	16,548	7,535
1951	63,025	20,038	26,643	12,493	21,649	8,880
1952	75,374	20,738	29,472	13,548	27,344	9,870
1953	81,892	23,114	25,016	13,914	24,050	10,984
New Brunswick........1950	68,647	17,611	24,632	8,118	19,094	5,821
1951	59,036	16,897	33,157	9,435	23,059	6,891
1952	79,552	20,223	34,145	10,794	27,289	7,900
1953	87,215	22,333	29,450	10,356	23,269	7,765
Quebec................1950	393,371	139,535	164,240	82,075	104,533	46,905
1951	409,910	156,213	255,863	92,036	165,120	58,859
1952	509,560	161,995	232,625	114,688	179,487	72,484
1953	574,921	195,365	223,266	121,627	174,902	84,972
Ontario................1950	488,571	205,200	351,171	151,514	240,540	96,758
1951	523,880	231,214	366,206	150,912	249,995	102,145
1952	560,228	240,034	296,160	154,032	233,702	105,694
1953	648,590	266,441	303,191	164,076	245,080	114,088
Manitoba. 1950	90,234	47,853	49,671	29,335	35,806	20,473
1951	81,496	46,799	50,269	30,681	34,574	21,595
1952	91,090	47,685	47,856	33,158	34,794	22,309
1953	99,629	59,396	45,820	38,480	33,418	27,958
Saskatchewan.........1950	55,621	23,732	33,915	14,679	25,262	9,720
1951	51,860	22,664	37,184	16,073	27,179	10,327
1952	56,703	23,744	41,467	18,653	29,923	11,666
1953	62,808	24,610	39,689	18,079	30,279	11,540
Alberta................1950	97,443	40,061	66,436	28,374	52,224	18,593
1951	98,375	43,108	77,954	31,906	59,435	21,986
1952	111,219	45,934	82,990	39,054	63,241	25,882
1953	124,261	49,750	69,813	35,546	55,662	24,499
British Columbia......1950	198,857	77,057	83,163	36,024	59,988	23,268
1951	218,467	81,073	88,674	40,706	69,171	28,957
1952	255,842	97,552	89,076	56,801	73,449	43,825
1953	252,192	105,677	79,495	59,308	67,426	46,669

Section 6.—Vocational Training*

The Federal Department of Labour, in co-operation with the provincial governments, carries on the following types of training: (1) youth training; (2) assistance to students by way of bursaries; (3) apprenticeship; (4) training of unemployed persons; (5) assistance to the provinces for vocational schools; (6) training of military personnel; and (7) training of workers for defence industries.

The Vocational Training Advisory Council, appointed under authority of the Vocational Training Co-ordination Act, 1942, advises the Minister of Labour on the general aspects of training plans. The Council is representative of employers, organized labour, vocational education and of veterans' and women's organizations. In November 1952, an Advisory Committee on Apprenticeship Training was appointed to advise the Minister on special problems of apprenticeship and industrial training.

Youth Training.—The youth training program consists, for the most part, of various general and specialized courses for rural young people in agriculture, home crafts and handicrafts and other related subjects.

Federal Government allotments to the different provinces for this type of training for the year ended Mar. 31, 1953, together with claims paid, including commitments from previous years, to Apr. 30, 1953, were as follows:—

Province	*Allotment*	*Payment*	*Province*	*Allotment*	*Payment*
	$	$		$	$
Newfoundland........	11,375	13,670	Manitoba.............	20,000	12,074
Prince Edward Island.	7,300	8,710	Saskatchewan........	45,000	43,769
Nova Scotia..........	30,447	24,110	Alberta...............	40,000	29,573
New Brunswick......	40,225	39,925	British Columbia.....	52,500	50,677
Quebec...............	177,753	182,921			
Ontario...............	100,000	100,000	TOTALS...........	524,600	505,430

Assistance to Students.—Under the Youth Training Division of the Vocational Training Agreement with each province, assistance may be provided for nurses-in-training at hospitals and for university students in courses leading to a degree who have good academic standing but who, without financial assistance, cannot continue training. At the discretion of the provincial authorities, assistance may be given in the form of a grant or loan, or a combination of the two.

The value of Federal Government assistance for such purposes may be assessed from the following approximate amounts paid to the provinces during the year ended Mar. 31, 1953:—

Province	*Amount*	*Province*	*Amount*
	$		$
Newfoundland....................	11,375	Manitoba.........................	6,170
Prince Edward Island............	7,346	Saskatchewan.....................	29,375
Nova Scotia......................	8,468	Alberta...........................	13,205
New Brunswick..................	14,650	British Columbia.................	32,530
Quebec...........................	121,493		
Ontario...........................	100,000	TOTAL.....................	344,612

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* More detailed information is given in the Department of Labour publication, *Canadian Vocational Training Annual Report 1952-53.*

Financial help was given to 698 nurses-in-training and to 3,965 students at universities. Included in the total number of university students were 1,056 taking courses in medicine and veterinary medicine, 89 in dentistry, 916 in applied science and engineering, 147 in agriculture and 707 in arts and science. Total federal payments in the past 14 years, amounting to $2,663,069, have assisted 31,337 students.

Apprenticeship Training.—Apprenticeship agreements are in effect with all provinces except Newfoundland, Prince Edward Island and Quebec. Of the trades designated under the provincial Acts, emphasis is being given to the building and construction trades. In some provinces, certain categories of apprentices are given full-time training of a practical as well as a technical nature for a period of one to three months each year. For other categories, part-time training is given either in afternoon or evening classes for about seven months of the year. Provision is made with employers for adequate supervision of apprentices working on the job by the appointment of instructor-supervisors who instruct full-time classes for six to eight months and supervise for the remaining part of the year. Use is also made of trade advisory committees. Costs are shared equally by the province concerned and the Federal Government. At Mar. 31, 1953, the total number of apprentices registered was 11,746 in the seven provinces having agreements with the Federal Government.

Federal Government allotments made for the year ended Mar. 31, 1953, and claims paid (including commitments from previous years) to Apr. 30, 1953, to the different provinces, were as follows:—

Province	*Allotment*	*Payment*
	$	$
Nova Scotia	39,500	24,133
New Brunswick	40,000	44,064
Ontario	290,000	248,079
Manitoba	62,500	46,338
Saskatchewan	64,000	58,496
Alberta	317,600	316,077
British Columbia	33,500	37,515
TOTALS	847,100	774,702

Assistance for Vocational Schools.—A ten-year agreement for vocational school assistance was signed in 1945 by nine provinces and, in 1950, an agreement was made with Newfoundland. The following payments are made by the Federal Government:—

1. (1) An annual grant of $10,000 to each province;
2. (2) an annual allotment of $1,965,800 distributed among the ten provinces in accordance with the number of young persons in each province in the age-group 15-19 years;
3. (3) a special allotment of $10,292,250 to be used for capital expenditure for building and equipment and to be distributed among the provinces on the same basis as the annual allotment.

All federal allotments, except the annual grant under item (1), must be matched by an expenditure of equal amount by the provincial government concerned.

The assistance given by this agreement has resulted in marked expansion of vocational training across the country. Federal approval has been given to 120 vocational building projects consisting of new schools or vocational additions to existing schools. Of these, 104 were completed by Mar. 31, 1953. Provision has been made for young people in rural areas of facilities for training in homemaking and related subjects, vocational agriculture, and farm mechanics. Since the beginning of the agreement, total federal payments under the annual allotment have amounted to approximately $14,910,994 and capital payments for buildings and equipment to about $9,224,027. Federal annual and capital allotments to each province, together with the amount of claims paid during the year ended Mar. 31, 1953, were as follows:—

Province	*Annual Allotment*		*Special Capital Allotment (Building and Equipment)*	
	Allotment[1]	*Payment*	*Allotment*	*Payment*
	$	$	$	$
Newfoundland	66,600	56,737	292,250	—
Prince Edward Island	25,500	25,500	82,000	—
Nova Scotia	106,000	63,901	504,300	2,294
New Brunswick	89,800	89,800	433,000	—
Quebec	638,100	728,890	3,139,400	—
Ontario	597,500	597,500	3,031,500	1,076,538
Manitoba	116,500	116,680	656,000	44,053
Saskatchewan	137,500	152,898	858,200	11,115
Alberta	147,600	147,600	700,200	—
British Columbia	140,700	140,700	595,400	—
TOTALS	2,065,800	2,120,205	10,292,250	1,134,000

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[1] Includes unmatched grant of $10,000 to each province.

Training of Unemployed Persons.—The Canadian Vocational Training and Co-ordination Act provides for the training of unemployed persons in receipt of unemployment insurance benefits. An amendment passed in 1948 extends the provisions to include those not in receipt of unemployment insurance benefits. The schedule covering the training of unemployed persons was accepted by all provinces, but training has not been carried out in Newfoundland or Prince Edward Island, the need for it not having arisen. Approved costs are shared equally by the province concerned and the Federal Government, the province recommending to the Federal Minister of Labour the scale of training allowances that should be paid.

In the year ended Mar. 31, 1953, approximately 130,497 days' training was given to 1,805 individuals. At the end of that year, 689 were under training. The largest enrolment was in classes for nurses' aides. No training under this heading was given for the designated apprentice trades.

Federal Government allotments to the different provinces for this type of training for the year ended Mar. 31, 1953, together with claims paid (including commitments from previous years) to Apr. 30, 1953, were as follows:—

Province	*Allotment*	*Payment*
	$	$
Newfoundland	3,625	—
Nova Scotia	85,000	60,473
New Brunswick	36,700	34,941
Quebec	15,000	13,940
Ontario	34,000	17,841
Manitoba	25,000	16,228
Saskatchewan	31,000	25,923
Alberta	60,000	50,879
British Columbia	15,000	7,528
TOTALS	303,325	227,754

Training of Military Personnel.—Provision is made for the training of service tradesmen in such categories as might be requested by the Department of National Defence and for whom the provincial governments have the necessary training facilities. Training during 1952-53 was on a comparatively small scale, with an enrolment of 713 trainees in the Provinces of New Brunswick, Quebec, Ontario, Manitoba and Alberta. Training was given to driver-mechanics, motor-vehicle mechanics and electrical mechanics for the Army and in telecommunications for the RCAF. The entire cost of this type of training is paid by the Federal Government. Allotments made for the year ended Mar. 31, 1953, and claims paid (including commitments from previous years) to Apr. 30, 1953, were as follows:—

Province	*Service*	*Allotment*	*Payment*
			$
New Brunswick	Army	16,000	12,586
Quebec	Army	7,542	6,800
Ontario	Air Force	30,000	12,149
Manitoba	Army	30,000	11,541
Alberta	Army	55,000	41,094
TOTALS		138,542	84,170

Training of Workers for Defence Industries.—Agreements have been entered into with the Provinces of British Columbia, Alberta, Manitoba, Ontario, Quebec, New Brunswick and Nova Scotia and special classes for the training of workers in defence industries have been established. Such classes have been organized in aircraft sheet-metal work, machine-shop practice and machine-tool operations, welding and drafting. Industrial establishments are being encouraged to organize and operate plant-training programs and special pre-employment classes may be set up to meet any general need that may develop. Federal Government allotments and payments made for the year ended Mar. 31, 1953, were as follows:—

Province	*Allotment*	*Payment*
	$	$
Nova Scotia	65,250	46,303
New Brunswick	20,231	19,521
Quebec	35,000	14,087
Ontario	75,000	6,856
Manitoba	3,750	[1]
Alberta	10,000	3,823
British Columbia	15,000	11,461
TOTALS	224,231	102,050

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[1] No training given.

Section 7.—Industrial Accidents and Workmen's Compensation

Subsection 1.—Fatal Industrial Accidents

Statistics of fatal industrial accidents have been compiled by the Federal Department of Labour since 1903. The data are now obtained from provincial Workmen's Compensation Boards, the Board of Transport Commissioners and other government authorities, departmental correspondents and from press reports.

31.—Fatal Industrial Accidents, by Industry, 1950-53

(Includes Newfoundland since Apr. 1, 1949)

Industry	Numbers				Percentages of Total			
	1950	1951	1952	1953p	1950	1951	1952	1953p
Agriculture	60	102	102	119	4·7	7·2	7·0	8·8
Logging	160	181	177	167	12·5	12·8	12·2	12·4
Fishing and trapping	42	21	21	36	3·3	1·5	1·5	2·7
Mining, non-ferrous smelting and quarrying	173	191	212	188	13·6	13·5	14·6	14·0
Manufacturing	247	232	236	243	19·3	16·4	16·3	18·1
Construction	160	215	247	228	12·5	15·2	17·0	16·9
Electric light and power	62	31	43	34	4·9	2·2	3·0	2·5
Transportation and public utilities	199	243	254	180	15·6	17·2	17·5	13·4
Trade	54	53	48	60	4·2	3·7	3·3	4·5
Finance	—	5	1	4	—	0·3	0·1	0·3
Service	120	141	108	86	9·4	10·0	7·5	6·4
Totals	**1,277**	**1,415**	**1,449**	**1,345**	**100·0**	**100·0**	**100·0**	**100·0**

Causes of Industrial Fatalities.—Preliminary figures indicate that, during 1953, 386 fatal accidents to gainfully employed persons were the result of being "struck by tools, machinery, moving vehicles and other objects". Within this group 63 deaths were caused by falling trees and branches, 50 by automobiles and trucks, 29 by landslides and cave-ins, and 28 by objects falling or flying in mines and quarries. Collisions, derailments, wrecks, etc., were responsible for 311 industrial fatalities. Automobiles and trucks were involved in 140 of these accidents, tractors in 54, watercraft in 49, aircraft in 40, steam railways in 21, animal-drawn vehicles in four and other agencies in three. Falls and slips were responsible for 230 deaths in industry and of these 212 were falls to different levels, including 80 resulting from falls into rivers, lakes, sea or harbours. Deaths of 27 workers were caused by falls from scaffolds and stagings, 22 by falls from buildings, roofs and towers, and 18 by falls from ladders and stairs. There were 91 deaths caused by workers being caught in, on or between parts of machinery or other agencies. Contact with electric current caused 74 deaths in industry including 65 workers who came in contact with electric wires, etc., and nine who were killed by lightning.

Subsection 2.—Workmen's Compensation*

In all provinces, legislation is in force providing for compensation for injury to a workman by accident arising out of and in the course of employment, or by a specified industrial disease, except where the workman is disabled for fewer than a stated number of days. The Acts of all provinces provide for a compulsory system of collective liability on the part of employers. To ensure payment of compensation, each Act provides for an accident fund, administered by the province, to which employers are required to contribute at a rate determined by the Workmen's Compensation Board in accordance with the hazards of the industry. A workman to whom these provisions apply has no right of action against his employer for injury from an accident during employment. In Ontario and Quebec, public authorities, railway and shipping companies, and telephone and telegraph companies are individually liable for compensation as determined by the Board, and pay a proportion of the expenses of administration. A federal Act provides for compensation for accidents to Federal Government employees according to the conditions laid down by the Act of the province in which the accident occurs. Seamen who are not under a provincial Workmen's Compensation Act are entitled to compensation under the Merchant Seamen Compensation Act, 1946.

In all provinces, free medical aid is given to workmen during disability. Compensation is payable in all provinces for anthrax and for poisoning from arsenic, lead, mercury and phosphorus, and silicosis is compensated under certain conditions. Other diseases compensated vary according to the industries of the provinces.

Scope of the Workmen's Compensation Acts.—The Acts vary in scope but, in general, they cover construction, mining, manufacturing, lumbering, fishing, transportation and communications and the operation of public utilities. Undertakings in which not more than a stated number of workmen are usually employed may be excluded, except in Alberta and British Columbia.

Benefits.—Under each Act, except those of Saskatchewan and Alberta, if a workman is disabled from earning full wages for fewer than a stated number of days, usually called the "waiting period", he cannot recover compensation for the period of his disability or, in Manitoba and British Columbia, for the first three days of his disability. Where the disability continues beyond the required number of days, compensation is payable from the date of the accident. Medical aid is always paid from the date of the accident. In Saskatchewan and Alberta, the waiting period is one day, that is, compensation is not payable when the workman is off work only for the day on which the accident occurs. When he is disabled for any longer time, compensation begins from the day following the accident. Compensation in fatal accidents is paid as follows:—

Burial expenses: $250 in Saskatchewan and British Columbia, $200 in Newfoundland, Nova Scotia, New Brunswick, Ontario, Manitoba, and Alberta, $175 in Quebec, and $150 in Prince Edward Island. In seven provinces a further sum is allowed for transporting the workman's body.

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* More detailed information is given in the Department of Labour publication, *Workmen's Compensation in Canada, A Comparison of Provincial Laws.*

To a widow or invalid widower (or to a foster mother as long as the children are under the age limit—a monthly payment of $75 in Ontario and British Columbia, $60 in Saskatchewan, $50 in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, and Alberta and of $45 in Quebec. In addition, a lump sum of $200 is paid in Ontario and of $100 in all other provinces.

For each child in the care of a parent or foster mother receiving compensation—a monthly payment of $25 in Ontario, Saskatchewan and Alberta, $20 in Nova Scotia, Manitoba and British Columbia, $12.50 in Prince Edward Island, $12 in Newfoundland and New Brunswick, and $10 in Quebec.

For each orphan child—a monthly payment of $35 in Ontario, $30 in Nova Scotia, Manitoba, Saskatchewan and British Columbia, $25 in Prince Edward Island, New Brunswick and Alberta (in Alberta, a further amount, not exceeding $10 a month, may be given at the discretion of the Board), $20 in Newfoundland, and $15 in Quebec, with a maximum of $100 a month to any one family in Prince Edward Island and of $120 in Nova Scotia.

Invalids excepted, payments to children are not continued beyond the age of 16 years in seven of the provinces but the Board has discretion to pay compensation to the age of 18 years if it is considered desirable to continue a child's education. In Quebec, the age limit is 18 years and in New Brunswick and British Columbia, compensation is paid to the age of 18 years if a child is regularly attending school. In Nova Scotia, New Brunswick, Ontario, Manitoba, Saskatchewan and British Columbia, payments to invalid children are continued until recovery, and the other provinces make payments only for the length of time the Board considers that the workman would have contributed to their support.

Where the only dependants are persons other than consort or children, all the Acts provide that compensation is to be a reasonable sum proportionate to the pecuniary loss but the total monthly amount to be paid to all such dependants is limited to $100 in Ontario, $85 in Alberta, $75 in British Columbia, $60 in Nova Scotia and Manitoba, and $45 in Prince Edward Island. In British Columbia, if a workman leaves dependent parents as well as a widow or orphans, the maximum payable to a parent or parents is $75 a month. Compensation to dependants, other than consort or children, is continued only for such time as the Board considers that the workman would have contributed to their support.

Except in Alberta and British Columbia, each Act places a maximum on the total amount of benefits payable to all dependants if the workman dies. In Newfoundland, Nova Scotia and New Brunswick, the maximum is two-thirds of the workman's earnings, in Quebec and Manitoba 70 p.c., and in Prince Edward Island 75 p.c. In Ontario and Saskatchewan, the average earnings are the maximum amount payable.

Irrespective of the workman's earnings, however, compensation may not fall below certain minimum monthly amounts. The minimum payable to a consort and one child in Quebec is $55 a month or $65 if there is more than one child; in Manitoba, the minimum is $70 if there is a consort and one child and $90 if there is more than one child; in Saskatchewan, the minimum is $85 a month to a consort and child and $100 if there are more children. In Newfoundland, a widow must receive at least $50 a month with a further payment of $12 for each child under 16 years of age unless the total exceeds $100. In Ontario, the minimum payable to a widow is $75 a month with a further payment of $25 for each child, up to but not exceeding $150 a month.

Compensation for total disablement in Newfoundland, Nova Scotia and New Brunswick is a periodical payment for the duration of the disability equal to $66\frac{2}{3}$ p.c. of average earnings; in Quebec and Manitoba the rate is 70 p.c. of earnings; and 75 p.c. in Prince Edward Island, Ontario, Saskatchewan, Alberta and British Columbia. Except in New Brunswick, the Acts fix minimum sums to be paid for a permanent total disability. The minimum is $15 a week in Prince Edward Island, Nova Scotia, Quebec, Manitoba and British Columbia, $20 in Saskatchewan, and $25 in Alberta. In Newfoundland, the minimum is $65 a month and in Ontario, $100 a month. If, however, average earnings are less than these minimum amounts, the amount of the earnings is paid in all provinces except Saskatchewan. For partial disablement, compensation in most provinces is a percentage of the difference in earnings before and after the accident, the percentage rate being the same as in total disablement. In New Brunswick and Alberta, the amount is determined by the Board according to the diminution of earning capacity. In all provinces except British Columbia, if the impairment of earning capacity is 10 p.c. or less, a lump sum may be given.

The average earnings on which compensation is based are limited to $4,000 a year in Ontario, Saskatchewan and British Columbia, $3,000 in Newfoundland, Nova Scotia, New Brunswick, Quebec, Manitoba and Alberta, and $2,500 in Prince Edward Island. If the workman's earnings at the time of an accident are not considered a proper basis for compensation, the Board may use as a basis the average earnings of another person in the same grade of work. Compensation paid workmen under 21 years of age may be raised later, if it appears that their earning power would have increased had the injury not occurred.

Table **32** gives the number of industrial accidents reported by each of the provinces and the amount of compensation paid by the Workmen's Compensation Boards.

32.—Industrial Accidents Reported and Compensation Paid by Workmen's Compensation Boards,[1] 1950-53

Year and Province	Industrial Accidents Reported					Compensation Paid
	Medical Aid Only[2]	Temporary Disability	Permanent Disability	Fatal	Total	
	No.	No.	No.	No.	No.	$
1950						
Prince Edward Island	320	363	3	..	686	43,523
Nova Scotia	8,542	7,591	506	58	16,697	1,316,737
New Brunswick	5,936	8,828	231	28	15,023	1,187,678
Quebec	..	..	..	197	86,246	9,241,226
Ontario	118,001	43,820	1,677	225	163,723	20,487,396
Manitoba	10,516	5,652	316	29	16,513	1,682,574
Saskatchewan	5,610	5,691	114	26	11,441	1,804,606
Alberta	18,836	13,804	577	120	33,337	1,085,159
British Columbia	43,992	25,852	1,498	162	71,504	12,164,699
Totals	**211,753**	**111,601**	**4,922**	845	**415,170**	**49,013,598**

For footnotes, *see* end of table.

32.—Industrial Accidents Reported and Compensation Paid by Workmen's Compensation Boards,[1] 1950-53—concluded

Year and Province	Industrial Accidents Reported					Compensation Paid
	Medical Aid Only[2]	Temporary Disability	Permanent Disability	Fatal	Total	
	No.	No.	No.	No.	No.	$
1951						
Newfoundland[3]	3,425	2,725	67	11	6,228	188,603
Prince Edward Island	411	439	10	..	860	62,204
Nova Scotia	9,545	7,503	482	43	17,573	1,298,363
New Brunswick	5,710	9,234	206	27	15,177	1,287,843
Quebec	..	..	..	207	95,930	10,838,436
Ontario	129,486	45,010	1,775	292	176,563	24,999,520
Manitoba	11,249	5,577	349	37	17,212	1,641,093
Saskatchewan	6,711	6,812	135	18	13,676	1,700,302
Alberta	20,312	14,754	636	102	35,804	1,158,684
British Columbia	40,268	26,023	1,513	184	67,988	11,451,445
Totals	**227,117**	**118,077**	**5,173**	**921**	**447,011**	**54,626,493**
1952						
Newfoundland	5,466	4,065	125	19	9,675	355,689
Prince Edward Island	424	446	11	1	882	66,130
Nova Scotia	10,236	6,886	539	63	17,724	1,357,622
New Brunswick	5,571	8,463	205	28	14,267	929,470
Quebec	..	..	..	312	97,177	12,337,958
Ontario	137,938	54,802	2,157	309	195,206	29,027,277
Manitoba	11,351	5,522	337	36	17,246	2,115,498
Saskatchewan	7,491	6,939	112	37	14,579	2,374,747
Alberta	23,803	14,895	730	92	39,520	1,497,452
British Columbia	42,855	25,551	1,391	240	70,037	12,902,019
Totals	**245,135**	**127,569**	**5,607**	**1,137**	**476,313**	**62,963,862**
1953p						
Newfoundland	5,672	3,869	51	16	9,608	325,334
Prince Edward Island	423	432	2	..	857	79,523
Nova Scotia	8,887	6,798	121	38	15,844	1,338,288
New Brunswick	..	..	..	..	13,805	898,816
Quebec	..	..	..	191	93,306	10,336,012
Ontario	143,467	55,992	2,198	319	201,976	31,679,315
Manitoba	10,799	5,253	320	42	16,414	2,495,466
Saskatchewan	8,429	8,951	222	46	17,648	2,118,760
Alberta	23,522	17,570	749	124	41,965	1,793,931
British Columbia	43,569	23,909	1,253	207	68,938	13,788,224
Totals	**244,768**	**122,774**	**4,916**	**983**	**480,361**	**64,853,669**

[1] Owing to variations in legislation and administrative methods of the various provincial Workmen's Compensation Boards, the information contained in this table is not exactly comparable as between provinces; it is however comparable from year to year for any one province. [2] Accidents requiring medical treatment but not causing disability for a sufficient period to qualify for compensation; the period varies in the several provinces. [3] The Workmen's Compensation Board of Newfoundland commenced operations on Apr. 1, 1951.

Section 8.—Workers Affected by Collective Agreements

Statistics on the number of workers affected by collective agreements in Canada are compiled by the Department of Labour. Table **33** gives figures for the principal industrial groups. The second column shows the number of workers affected by agreements extended under the Quebec Collective Agreement Act (*see* Sect. 1, ss. 2, p. 765). Any duplication of the numbers of workers covered by agreements under this Act and by other agreements is eliminated in the third column. A more detailed table and studies of agreements in certain industries are available from the Department of Labour, Ottawa.

33.—Workers Affected by Collective Agreements, by Industry, 1952

Industrial Group	Agreements (other than those in Column 2)	Agreements Extended under Collective Agreement Act, Quebec	Total[1]
	No.	No.	No.
Agriculture	**34**	—	**34**
Forestry	**67,843**	—	**67,843**
Fishing	**10,045**	—	**10,045**
Mining (including milling), Quarrying and Oil Wells	**65,181**	**40**	**65,221**
Metal mining	35,030	—	35,030
Fuels	21,216	—	21,216
Non-metal mining	7,105	40	7,145
Quarrying, clay and sand pits	1,830	—	1,830
Manufacturing	**656,679**	**87,861**	**702,939**
Food and beverages	62,308	1,663	63,971
Tobacco products	5,545	—	5,545
Rubber products	15,364	—	15,364
Leather products	12,149	14,463	20,575
Textile products (except clothing)	44,827	1,336	45,391
Clothing (textile and fur)	50,613	39,777	67,392
Wood products	46,836	5,182	50,659
Paper products	59,339	3,162	61,016
Printing, publishing and allied industries	20,841	6,991	22,850
Iron and steel products	112,761	3,262	115,330
Transportation equipment	99,365	10,196	107,766
Non-ferrous metal products	33,989	150	34,139
Electrical apparatus and supplies	41,951	—	41,951
Non-metallic mineral products	17,247	709	17,354
Products of petroleum and coal	9,124	—	9,124
Chemical products	18,579	970	18,671
Miscellaneous manufacturing industries	5,841	—	5,841
Construction	**82,684**	**97,130**	**176,016**
Transportation, Storage and Communication	**305,820**	**8,160**	**306,253**
Transportation	262,444	8,160	262,877
Storage	3,501	—	3,501
Communication	39,875	—	39,875
Public Utility Operations	**27,443**	—	**27,443**
Trade	**40,815**	**12,054**	**49,746**
Finance, Insurance and Real Estate	**1,095**	—	**1,095**
Service	**92,778**	**10,681**	**101,547**
Totals	**1,350,417**	**215,926**	**1,508,182**

[1] Duplications in columns 1 and 2 eliminated from these totals.

Section 9.—Organized Labour in Canada*

At the beginning of 1954, there were 1,267,911 labour union members in Canada, an increase of 4 p.c. over the figure for the previous year. The majority of the unions in Canada are affiliated with a central labour congress and their membership is listed in Table **36**. In addition, each of the three largest congresses is discussed below.

Trades and Labour Congress of Canada.—The Trades and Labour Congress of Canada is the oldest of the central labour organizations in Canada. After the disbanding of the Canadian Labour Union, which had drawn together local unions in Ontario from 1873 to 1877, inclusive, there was no central organization until 1883, when the Trades and Labour Council of Toronto called a conference of local unions and plans were made to establish a national organization which was formally set up in 1886.

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* Information concerning unions is published in the Department of Labour annual publication, *Labour Organization in Canada.*

Affiliated with the Trades and Labour Congress of Canada at the present time are "international" trade unions, almost all of which are also affiliated with the American Federation of Labour, a number of Canadian or "national" unions and a number of directly chartered labour unions.

Canadian Congress of Labour.—This Congress was organized in September 1940, when the All-Canadian Congress of Labour, formed in 1927, amended its constitution to permit the affiliation with the Congress of the Canadian branches of those international unions which, in the United States, are affiliated with the Congress of Industrial Organizations. The Canadian Congress includes among its members a number of unions to which it has granted charters.

Canadian and Catholic Confederation of Labour.—National Catholic unions in Canada date from 1901. In 1921, these local Catholic syndicates, grouped as far as possible into federations according to industry, formed a central organization, the Canadian and Catholic Confederation of Labour.

34.—Membership of Labour Unions in Canada, 1919-54

Year	Members	Year	Members	Year	Members
	No.		No.		No.
1919	378,047	1931	310,544	1943	664,533
1920	373,842	1932	283,096	1944	724,188
1921	313,320	1933	285,720	1945	711,117
1922	276,621	1934	281,274	1946	831,697
1923	278,092	1935	280,648	1947	912,124
1924	260,643	1936	322,746	1948	977,594
1925	271,064	1937	383,492	1949	1,005,639
1926	274,604	1938	381,645		
1927	290,282	1939	358,967	1951[1]	1,028,521
1928	300,602	1940	362,223	1952	1,146,121
1929	319,476	1941	461,681	1953	1,219,714
1930	322,449	1942	578,380	1954	1,267,911

[1] Figures for 1949 and previous years are as at Dec. 31; figures from 1951 are as at Jan. 1.

35.—Union Membership and Local Branches in Canada, as at Jan. 1, 1953 and 1954

Organization	Jan. 1, 1953		Jan. 1, 1954	
	Branches	Membership	Branches	Membership
	No.	No.	No.	No.
Trades and Labour Congress of Canada	3,318	558,722	3,471	596,004
American Federation of Labor only	61	10,524	50	9,748
Canadian Congress of Labour	1,414	352,538	1,424	360,782
Congress of Industrial Organizations only	9	3,000	10	2,430
Canadian and Catholic Confederation of Labour	451	104,486	454	100,312
International Railway Brotherhoods (Independent)	389	41,751	385	40,922
Unaffiliated international, national, regional and local unions	593	148,693	631	157,713
Totals	**6,235**	**1,219,714**	**6,425**	**1,267,911**

36.—Labour Unions Reporting 1,000 or more Members in Canada, as at Jan. 1, 1953 and 1954

Organization	Reported or Estimated Membership	
	1953	1954
	No.	No.
International Unions		
Automobile, Aircraft and Agricultural Implement Workers of America, International Union, United (CIO-CCL)	57,905	65,000
Bakery and Confectionery Workers' International Union of America (AFL-TLC)	4,500	4,830
Barbers, Hairdressers, Cosmetologists and Proprietors' International Union of America, The Journeymen (AFL-TLC)	1,466	1,586
Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, International Brotherhood of (AFL-TLC)	10,541	10,260
Bookbinders International Brotherhood of (AFL-TLC)	2,686	2,596
Brewery, Flour, Cereal, Soft Drink and Distillery Workers of America, International Union of United (CIO-CCL)	4,000	4,200
Bricklayers, Masons and Plasterers' International Union of America (AFL-TLC)	4,946	5,444
Bridge, Structural and Ornamental Iron Workers, International Association of (AFL-TLC)	5,173	6,400
Building Service Employees' International Union (AFL-TLC)	4,036	4,539
Carpenters and Joiners of America, United Brotherhood of (AFL-TLC)	52,770	54,947
Cement, Lime and Gypsum Workers' International Union, United (AFL-TLC)	2,613	2,760
Chemical Workers of America, United Gas, Coke and (CIO)	3,000	2,348
Chemical Workers' Union, International (AFL-TLC)	10,500	11,500
Clothing Workers of America, Amalgamated (CIO-CCL)	12,500	13,000
Commercial Telegraphers' Union, The (AFL-TLC)	4,246	4,367
Communications Workers of America (CIO-CCL)	2,500	2,425
Distillery, Rectifying and Wine Workers' International Union of America (AFL-TLC)	3,300	3,300
Electrical, Radio and Machine Workers, International Union of (CIO-CCL)	4,500	10,000
Electrical, Radio and Machine Workers of America, United (Ind.)	25,700	24,600
Electrical Workers, International Brotherhood of (AFL-TLC)	20,000	22,000
Engineers, International Union of Operating (AFL)	8,560	9,836
Fire Fighters, International Association of (AFL-TLC)	6,574	6,800
Firemen and Oilers, International Brotherhood of (AFL-TLC)	3,000	3,000
Fur and Leather Workers' Union of the United States and Canada, International (Ind.)	6,000	7,500
Garment Workers of America, United (AFL-TLC)	1,500	1,550
Garment Workers' Union, International Ladies' (AFL-TLC)	15,132	14,534
Hatters, Cap and Millinery Workers' International Union, United (AFL-TLC)	2,170	1,500
Hod Carriers, Building and Common Labourers' Union of America, International (AFL-TLC)	9,896	11,336
Hotel and Restaurant Employees' and Bartenders' International Union (AFL-TLC)	10,281	12,001
Laundry Workers' International Union (AFL-TLC)	1,252	1,400
Lithographers of America, Amalgamated (CIO-CCL)	1,799	1,864
Locomotive Engineers, Brotherhood of (Ind.)	8,462	8,025
Locomotive Firemen and Enginemen, Brotherhood of (Ind.)	9,798	9,298
Longshoremen's Association, Independent, International (TLC)	6,000	6,000
Longshoremen's and Warehousemen's Union, International (CCL)	1,607	1,846
Machinists, International Association of (AFL-TLC)	44,760	50,887
Maintenance of Way Employees, Brotherhood of (AFL-TLC)	18,000	18,000
Meat Cutters and Butcher Workmen of North America, Amalagamated (AFL-TLC)	1,000	1,100
Metal Workers' International Association, Sheet (AFL-TLC)	3,482	4,464
Mine, Mill and Smelter Workers, International Union of (Ind.)	30,000	30,000
Mine Workers of America, United (CCL)	27,258	24,884
Moulders' and Foundry Workers' Union of North America, International (AFL-TLC)	5,806	7,000
Musicians of the United States and Canada, American Federation of (AFL-TLC)	10,765	10,838
Office Employees' International Union (AFL-TLC)	2,417	2,618
Oil Workers' International Union (CIO-CCL)	3,789	4,093
Packinghouse Workers of America, United (CIO-CCL)	18,000	19,225
Painters, Decorators and Paperhangers of America, Brotherhood of (AFL-TLC)	5,224	5,616
Paper Makers, International Brotherhood of (AFL-TLC)	7,358	7,921
Plasterers' and Cement Masons' International Association of the United States and Canada, Operative (AFL-TLC)	2,065	2,223
Plumbing and Pipe Fitting Industry of the United States and Canada, United Association of Journeymen and Apprentices of the (AFL-TLC)	12,360	15,000
Printing Pressmen and Assistants' Union of North America, International (AFL-TLC)	6,638	6,320
Pulp, Sulphite and Paper Mill Workers, International Brotherhood of (AFL-TLC)	30,419	31,155
Railroad Telegraphers, The Order of (AFL-TLC)	9,658	9,588
Railroad Trainmen, Brotherhood of (Ind.)	21,507	21,815
Railway and Motor Coach Employees of America, Amalgamated of Street, Electric (AFL-TLC)	12,338	12,010

36.—Labour Unions Reporting 1,000 or more Members in Canada, as at Jan. 1, 1953 and 1954—continued

Organization	Reported or Estimated Membership	
	1953	1954
	No.	No.
International Unions—concluded		
Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, Brotherhood of (AFL-TLC)	16.282	21,000
Railway Carmen of America, Brotherhood of (AFL-TLC)	26,852	27,730
Railway Conductors of America, Order of (Ind.)	1,984	1,784
Retail Clerks' International Association (AFL-TLC)	2,923	3,394
Retail, Wholesale and Department Store Union (CIO-CCL)	18,500	15,000
Rubber, Cork, Linoleum and Plastic Workers of America, Union (CIO-CCL)	10,900	11,037
Seafarers' International Union of North America (AFL-TLC)	6,200	8,000
Stage Employees and Moving Picture Machine Operators of the United States and Canada, International Alliance of Theatrical (AFL-TLC)	1,514	1,574
Steelworkers of America, United (CIO-CCL)	70,000	70,000
Teamsters, Chauffeurs, Warehousemen and Helpers of America, International Brotherhood of (AFL-TLC)	18,977	23,867
Textile Workers of America, United (AFL-TLC)	6,000	6,000
Textile Workers Union of America (CIO-CCL)	13,750	18,500
Tobacco Workers' International Union (AFL-TLC)	5,095	5,426
Typographical Union, International (AFL-TLC)	5,976	6,170
Upholsterers' International Union of North America (AFL-TLC)	1,599	2,322
Woodworkers of America, International (CIO-CCL)	31,185	32,247
National Unions		
Association Ouvrière Canadienne, Inc. (Canadian Workers' Association, Inc.) (Ind.).	4,000	2,208
Bas Faconné et Circulaire, Inc., Fédération Nationale des Employés du (National Federation of Full Fashioned and Circular Hosiery Workers, Inc.) (CTCC)	2,200	1,800
Bâtiment et des Matériaux de Construction, Fédération Nationale Catholique des Métiers du (National Catholic Federation of Building and Construction Materials Trades) (CTCC)	20,473	18,428
Bois Ouvré du Canada, Inc., Fédération Catholique des Travailleurs du (Catholic Federation of Wood Workers of Canada, Inc.) (CTCC)	3,577	4,182
Chaussure du Canada, Inc., Fédération Nationale du Cuir et de la (National Federation of Leather and Shoe Workers of Canada, Inc.) (CTCC)	3,700	3,900
Chimique, Fédération Nationale des Travailleurs de l'Industrie (National Federation of Chemical Workers) (CTCC)	—	3,000
Civic Employees, Federation of (CCL)	2,139	1,500
Civil Service Association of Alberta, The (TLC)	5,222	5,500
Civil Service Association, The Saskatchewan (TLC)	4,010	4,335
Commerce, Inc., Fédération Nationale Catholique des Employés du (National Catholic Federation of Commerce Employees, Inc.) (CTCC)	3,260	3,400
Cultivateurs (Service Forestier), L'Union Catholique des (Catholic Union of Farmers, Forestry Service) (Ind.)	2,865	6,400
Engineers of Canada, National Union of Operating (CCL)	1,800	1,700
Fishermen and Allied Workers' Union, United (Ind.)	8,444	7,119
Fishermen, Newfoundland Federation of (Ind.)	9,985	7,181
Fishermen's Protective Union (Ind.)	2,000	2,000
Fruit and Vegetable Workers' Union, Federation of (TLC)	2,000	2,000
Government Employees' Association, British Colunbia (TLC)	8,801	9,038
Government Employees' Association, Newfoundland (TLC)	1,378	1,350
Imprimerie du Canada Enrg. Fédération des Métiers de l' (Federation of Printing Trades of Canada, Reg.) (CTCC)	3,500	3,400
Labourers' Union, Newfoundland (Ind.)	4,700	5,100
Letter Carriers, Federated Association of (TLC)	2,560	2,560
Longshoremen's Protective Union (St. John's) (Ind.)	2,560	2,000
Lumbermen's Association, Newfoundland (Ind.)	6,000	7,000
Marine Engineers of Canada, Inc., National Association of (TLC)	1,200	1,263
Marine Workers' Federation, Maritime (CCL)	3,000	2,500
Merchant Service Guild, Inc., Canadian (TLC)	1,820	1,851
Métallurgie, Fédération Nationale de la (National Metal Trades' Federation) (CTCC)	15,801	15,426
Minière Inc., Fédération Nationale des Employés de l'Industrie (National Federation of Mining Industry Employees, Inc.) (CTCC)	4,607	4,648
Municipales et Scolaires du Canada, Inc., Fédération Nationale des Employés des Corporations (National Federation of Employees of Municipal and School Corporations of Canada, Inc.) (CTCC)	5,212	5,222
National Council of Canadian Labour (Ind.)	5,446	6,547
One Big Union (Ind.)	12,320	12,280

36.—Labour Unions Reporting 1,000 or more Members in Canada, as at Jan. 1, 1953 and 1954—concluded

Organization	Reported or Estimated Membership	
	1953	1954
	No.	No.
National Unions—concluded		
Postal Employees Association, Canadian (TLC)	6,950	6,700
Public Service Employees, National Union of (CCL)	3,000	2,965
Pulpe et du Papier, Inc., Fédération Nationale des Travailleurs de la (National Federation of Pulp and Paper Workers, Inc.) (CTCC)	12,000	12,100
Railway Employees and Other Transport Workers, Canadian Brotherhood of (CCL)	35,083	32,778
Services, Inc., Fédération Nationale Catholique des (National Catholic Federation of Services, Inc.) (CTCC)	4,800	5,200
Shipyard General Workers' Federation of British Columbia (CCL)	2,500	2,750
Teachers' Federation, British Columbia (TLC)	6,910	7,297
Telephone Employees' Association, Canadian (Ind.)	10,871	10,944
Telephone Workers of British Columbia, Federation of (Ind.)	3,868	4,068
Textile, Inc. Fédération Nationale Catholique du (National Catholic Textile Federation, Inc.) (CTCC)	11,000	8,649
Traffic Employees' Association (Ind.)	9,923	9,811
Unemployment Insurance Commission Association, National (TLC)	4,500	5,300
Vêtement, Inc., Fédération Nationale des Travailleurs de l'Industrie du (National Federation of Clothing Industry Workers, Inc.) (CTCC)	4,300	4,036

Section 10.—Strikes and Lockouts*

For the last eight years the demand for increased wages has been the central issue in the majority of work stoppages. In 1953, this issue, often linked with questions involving union security and changes in working conditions, was responsible for 56 p.c. of the stoppages, involving 61 p.c. of the workers and causing 95 p.c. of the total time loss as compared with an average for the seven-year period, 1946-52, of 58 p.c. of the stoppages, 71 p.c. of the workers, and 87 p.c. of the time loss. Of the other disputes, those relating to working conditions brought about 12 p.c. of the stoppages; union questions, other than for increased wages, 15 p.c.; and discharge of workers, suspensions and employment of particular persons, other than in connection with union questions, 15 p.c. of the total. Sympathy strikes have been few in number during the last five years and in 1953 there was only one small stoppage from this cause.

Settlement of 75 of the 174 stoppages in 1953 was brought about by direct negotiation; provincial conciliation effected settlement in 17 stoppages, civic mediation in three and federal conciliation in two. Ten disputes were settled by arbitration; three were referred to labour boards; 33 were settled by return of workers and replacement, replacement being a factor in 12 disputes; and 13 were indefinite in result.

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* A complete review of strikes and lockouts during 1952 and 1953 will be found in Department of Labour reports.

37.—Summary Statistics of Strikes and Lockouts, 1944-53

Year	Strikes Beginning during the Year	Strikes and Lockouts in Existence in all Industries during the Year: Strikes and Lockouts	Employers	Workers Involved	Time Loss: In Man-Working Days	Average Days per Wage- and Salary-Earner[1]	Average Days per Worker Involved	Estimate of Working Time[1]
	No.	No.	No.	No.	No.	No.	No.	p.c.
1944	195	199	400	75,290	490,139	0·16	6·51	0·06
1945	196	197	418	96,068	1,457,420	0·49	15·17	0·17
1946	225	228	1,299	139,474	4,516,393	1·49	32·38	0·50
1947	232	236	1,173	104,120	2,397,340	0·77	23·02	0·26
1948	147	154	674	42,820	885,793	0·27	20·68	0·09
1949	132	137	542	51,437	1,063,667	0·32	20·68	0·11
1950	158	161	345	192,153	1,389,039	0·40	7·23	0·13
1951	257	259	646	102,870	901,739	0·24	8·77	0·08
1952	216	222	518	120,818	2,879,955	0·76	23·84	0·29
1953	167	174	384	55,988	1,324,715	0·35	23·66	0·13

[1] Based on the number of non-agricultural wage- and salary-earners in Canada.

38.—Strikes and Lockouts, by Industry, 1952 and 1953

Industry	1952: No. of Strikes and Lock-outs	1952: Workers Involved: No.	1952: Workers Involved: Per-cent-age	1952: Time Loss: Man-Working Days	1952: Time Loss: Per-cent-age	1953: No. of Strikes and Lock-outs	1953: Workers Involved: No.	1953: Workers Involved: Per-cent-age	1953: Time Loss: Man-Working Days	1953: Time Loss: Per-cent-age
Agriculture	[1]	...	...	...	...	[1]	...	...	...	...
Logging	**2**	**12,042**	**10·0**	**365,080**	**12·7**	[1]	...	...	...	...
Fishing and Trapping	**3**	**8,545**	**7·1**	**114,450**	**4·0**	**1**	**1,500**	**2·7**	**12,000**	**0·9**
Mining[2]	**26**	**9,539**	**7·9**	**91,825**	**3·2**	**27**	**15,274**	**27·2**	**681,918**	**51·5**
Coal	15	3,865	3·2	8,735	0·3	12	7,467	13·3	17,456	1·3
Other	11	5,674	4·7	83,090	2·9	15	7,807	13·9	664,462	50·2
Manufacturing	**112**	**65,315**	**54·1**	**1,814,584**	**63·0**	**82**	**22,034**	**39·4**	**477,786**	**36·1**
Vegetable foods, etc	9	2,340	1·9	37,102	1·3	2	730	1·3	19,260	1·5
Tobacco and liquors	1	208	0·2	400	0·0	[1]	...	...	...	...
Rubber and its products (including synthetic)	8	4,423	3·7	114,561	4·0	5	2,320	4·1	7,670	0·6
Animal foods	2	313	0·3	215	0·0	2	66	0·1	2,185	0·2
Boots and shoes (leather)	3	508	0·4	6,460	0·2	2	471	0·8	29,950	2·3
Fur, leather and other animal products	4	335	0·3	2,747	0·1	[1]	...	...	...	...
Textiles, clothing, etc	18	10,027	8·3	552,694	19·2	15	3,079	5·5	68,638	5·2
Pulp, paper and paper products	1	48	0·0	95	0·0	2	501	0·9	34,405	2·5
Printing and publishing	3	1,411	1·2	33,500	1·2	[1]	...	...	...	...
Miscellaneous wood products	13	23,790	19·7	711,500	24·7	12	3,795	6·9	177,645	13·4
Metal products	35	16,027	13·3	167,897	5·8	36	9,403	16·8	122,391	9·2
Ferrous	*25*	*14,806*	*12·3*	*149,403*	*5·2*	*24*	*6,003*	*10·7*	*92,681*	*7·0*
Non-ferrous	*10*	*1,221*	*1·0*	*18,494*	*0·6*	*12*	*3,400*	*6·1*	*29,710*	*2·2*
Shipbuilding	7	4,831	4·0	138,525	4·8	[1]	...	...	...	...
Non-metallic minerals, chemicals, etc	5	638	0·5	18,178	0·6	6	1,669	3·0	15,642	1·2
Miscellaneous products	3	416	0·3	30,710	1·1	[1]	...	...	...	...
Construction	**39**	**16,681**	**13·8**	**346,386**	**12·0**	**22**	**4,844**	**8·7**	**36,270**	**2·7**
Buildings and structures	36	16,488	13·6	344,226	11·9	19	4,520	8·1	35,928	2·7
Railway	[1]	...	...	...	...	[1]	...	...	...	...
Bridge[3]	[1]	...	...	...	...	[1]	...	...	...	...
Highway	[1]	...	...	...	...	[1]	...	...	...	...
Canal, harbour, waterway	[1]	...	...	...	...	[1]	...	...	...	...
Miscellaneous	3	193	0·2	2,160	0·1	3	324	0·6	342	0·0

For footnotes, *see* end of table.

38.—Strikes and Lockouts, by Industry, 1952 and 1953—concluded

Industry	1952					1953				
	No. of Strikes and Lock-outs	Workers Involved		Time Loss		No. of Strikes and Lock-outs	Workers Involved		Time Loss	
		No.	Per-cent-age	Man-Working Days	Per-cent-age		No.	Per-cent-age	Man-Working Days	Per-cent-age
Transportation and Public Utilities	**18**	**5,610**	**4·6**	**71,278**	**2·5**	**17**	**8,445**	**15·0**	**85,831**	**6·5**
Steam railways	2	84	0·0	290	0·0	[1]	...	...	...	...
Electric railways and local bus lines	1	4,668	3·9	60,000	2·1	4	5,196	9·3	5,435	0·4
Other local and highway transport	10	379	0·3	7,098	0·3	7	2,477	4·4	56,382	4·3
Water transport	3	351	0·3	800	0·0	3	474	0·8	8,584	0·6
Air transport	[1]	...	...	...	...	[1]	...	...	...	...
Telegraph and telephone	[1]	...	...	...	...	[1]	...	...	...	...
Electricity and gas	2	128	0·1	3,090	0·1	2	23	0·0	80	0·0
Miscellaneous	[1]	...	...	...	...	1	275	0·5	15,350	1·2
Trade	**12**	**1,589**	**1·3**	**66,387**	**2·3**	**15**	**3,338**	**6·0**	**20,470**	**1·5**
Finance	[1]	...	...	...	...	[1]	...	...	...	...
Service	**10**	**1,497**	**1·2**	**9,965**	**0·3**	**10**	**553**	**1·0**	**10,440**	**0·8**
Public administration[4]	2	365	0·3	1,375	0·0	2	186	0·3	2,886	0·2
Recreation	1	43	0·0	900	0·0	[1]	...	...	...	...
Business and personal	7	1,089	0·9	7,690	0·3	8	367	0·7	7,554	0·6
Totals	**222**	**120,818**	**100·0**	**2,879,955**	**100·0**	**174**	**55,988**	**100·0**	**1,324,715**	**100·0**

[1] None reported. [2] Includes non-ferrous metal smelting. [3] Includes erection of all large bridges. [4] Includes water service.

Section 11.—Canada and the International Labour Organization

The Department of Labour is the officially designated liaison agency between the Government of Canada and the International Labour Organization. The ILO was established in 1919, in association with the League of Nations under the Treaties of Peace, with the object of improving labour and social conditions throughout the world by international agreement and legislative action. Under an agreement approved by the General Conference of the International Labour Organization at its 29th Session held at Montreal, Que., Oct. 2, 1946, and by the United Nations General Assembly on Dec. 14, 1946, the Organization became a specialized agency of the United Nations although retaining its autonomy.

The ILO is an association of 69 Member States, financed by their governments, and democratically controlled by representatives of those governments and of their organized employers and workers. It is comprised of three main organs: (1) the International Labour Conference; (2) the International Labour Office, and (3) the Governing Body. Since World War II the ILO has extended its field of activities by the establishment of eight tripartite industrial committees to deal with problems of important world industries, by the holding of regional and special technical conferences, and by the expanded program of technical assistance to aid the development of backward countries in such fields as co-operatives, vocational training, and employment services.

The *International Labour Conference* meets annually and is a world parliament for consideration of labour and social problems and it is attended by four delegates from each Member State (two representing the Government, one representing the employers and one representing the workers) accompanied by technical advisers. The Conference formulates international standards concerning working and living conditions in the form of Conventions and Recommendations. A Convention, after adoption, must be considered by the competent authorities in each Member State with a view to possible ratification; however, each Member State decides whether or not to ratify any Convention, and only by ratification does it assume the obligation to bring its legislation in that field up to the standard set by the Convention. A Recommendation is less formal: it contains general principles for the guidance of governments in drafting legislation or in issuing administrative orders, and is not subject to ratification by the Member States.

The *International Labour Office* acts as the permanent secretariat of the ILO, and as a world research and information centre and publishing house on all subjects concerned with industry and labour. In the operational field it assists Member States by furnishing experts on manpower training and technical assistance. The ILO maintains branch offices in all parts of the world, including the Canada Branch, 95 Rideau Street, Ottawa.

The *Governing Body* of the ILO, by a constitutional amendment adopted in June 1953, consists of 40 members: 20 government representatives, 10 employers' representatives and 10 workers' representatives. Of the government seats, each of the 10 Member States of chief industrial importance (of which Canada is one) holds a permanent place, and the other 10 government representatives are elected triennially by the Conference. The worker and employer members are elected every three years at the Conference, by their groups. The Governing Body meets three times a year, and has general supervision over the work of the International Labour Office and the various Conferences and Committees, in addition to framing the budget and approving the agendas of the various Conferences. Canada's representative on the Governing Body is Mr. Arthur Brown, Deputy Minister of Labour for Canada.

There have been 36 Sessions of the International Labour Conference, at which 103 Conventions and 97 Recommendations have been adopted, covering a wide range of subjects such as industrial relations, freedom of association, hours of work, weekly rest, holidays with pay, minimum wages, night work of women and young persons, industrial health and safety, workmen's compensation, conditions of work for seamen and dockers, unemployment and health insurance, protection of migrant workers, equal remuneration, and many other aspects of industrial and social problems. By March 1954, the ratifications of Conventions by Member States totalled about 1,450.

Canada has ratified 18 ILO Conventions, of which 12 concern maritime and dock labour. In Canada, the provincial legislatures are the competent legislative authorities with jurisdiction over the subject covered by most of the ILO Conventions and Recommendations. The Department of Labour, as the official liaison agency with the International Labour Organization, is responsible for forwarding to the ILO Office annual reports on ratified Conventions as well as periodical reports on many other industrial and social matters. Canada is represented at most of the ILO annual and special meetings, and accounts of the discussions and the decisions are regularly published in the *Labour Gazette*. The Department also keeps provincial governments and employer and worker organizations informed of ILO activities. Thus, Canada continues to fulfil its obligations as one of the leading industrial Member States of the International Labour Organization.

CHAPTER XIX.—TRANSPORTATION

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Canada, which is over 4,000 miles in length from east to west, has its main topographic barriers running in a north-south direction. It has a relatively small population of 15,195,000 (June 1, 1954 estimate) unevenly distributed along a narrow southern strip of its vast area. These physiographic and population characteristics present unusual difficulties from the standpoint of transportation and communication. Different parts of the country are shut off from each other by water barriers such as Cabot Strait and the Strait of Belle Isle separating the Island of Newfoundland from the mainland; by areas of rough, rocky forest terrain such as the region lying between New Brunswick and Quebec and the areas north of Lakes Huron and Superior dividing the industrial region of Ontario and Quebec from the agricultural areas of the Prairie Provinces; and by the mountain barriers between the prairies and the Pacific Coast. To such a country, with a population so dispersed and producing for export as well as for consumption in distant areas of the country itself, efficient and economical transportation systems are necessities of existence.

The value of each of the principal agencies of transportation is appraised in Parts II, III, IV, V and VI of this Chapter. Government control over all such transportation is covered in Part I.

PART I.—GOVERNMENT CONTROL OVER AGENCIES OF TRANSPORTATION

The Federal Government's control and regulation of transportation reflects to a considerable extent conditions that date back to the period when the railways possessed a virtual monopoly of transportation within the country. Although federal regulation was a direct outcome of such particular matters as the prevention of unjust discrimination in rates and charges resulting from monopoly conditions in the industry and the safety of transportation facilities and operating practices, yet the railways have been so involved in the public interest that their regulation has been extended to become the most comprehensive of any industry in Canada.

In the meantime, conditions in the transportation industry have been drastically altered by the increasing competition arising from the advance of highway transportation. Unlike the competition that existed between railways in early stages of their development, to-day's competition shows little indication of starting a trend toward consolidation and a return to semi-monopolistic conditions within the industry. Because so many shippers now may provide their own transportation, it is evident that a large part of the present competition between common carriers will become a permanent feature of the transportation industry.

It is not surprising that regulations, which under monopoly conditions were not onerous to the railways or were purely nominal in their effect, should be alleged to have become increasingly restrictive and hampering under highly competitive conditions. Regulatory authorities are, therefore, faced with the problem of piecemeal revision of their regulations—retaining those where railway monopoly or near-monopoly conditions still make them necessary in the public interest, and relaxing those where competition can be relied on to protect the public in order to enable the railways to meet this competition more effectively. The emphasis has shifted from the regulation of monopoly to the co-ordination of several competing modes of transport.

In 1936, the Federal Department of Railways and Canals became the Department of Transport, unifying in one Department the control and supervision of railways, canals, harbours, marine and shipping, civil aviation, radio and meteorology.

Road and highway development is mainly under provincial or municipal control or supervision. The question of jurisdiction over interprovincial and international highway transport was answered by the Judgment of the Judicial Committee of the Privy Council dated Feb. 22, 1954, which held that this jurisdiction rested with the Federal Government.

A Conference between federal and provincial representatives was held in Ottawa in April 1954 to consider the means of implementing this decision. On June 26, 1954, the Motor Vehicle Transport Act was passed by Parliament giving to all provinces, at their option, the authority to apply to interprovincial and international highway transport the same regulations respecting certificates of public convenience and necessity and rates as they apply to undertakings operating entirely within the province. This Act has since been proclaimed for the provinces of Alberta, British Columbia, Manitoba, Nova Scotia, Ontario, Prince Edward Island and Saskatchewan.

Under the Transport Act, 1938, the Board of Railway Commissioners became the Board of Transport Commissioners and, in addition to its authority over railways, it was given power to regulate certain aspects of water transportation on the Great Lakes, the Mackenzie River and the Yukon River.

The Royal Commission on Transportation, in its Report to Parliament in 1951, recommended a further step in the co-ordination of transport agencies by the creating of a single Board to take over the functions now discharged by the Board of Transport Commissioners, the Air Transport Board and the Canadian Maritime Commission. No action has been taken by Parliament on this recommendation.

The Board of Transport Commissioners for Canada.—An explanation of the situation that led to the introduction of railway regulation by Commission in Canada, as well as other information relating to the organization, procedure, judgments, etc., of the Board of Transport Commissioners is given in the 1940 Year Book, pp. 633-635.

The powers of the Board with regard to rail transport cover almost all aspects of railway activities including corporate organization, location, construction and operation of lines, rates and charges. The railways under the Board's jurisdiction include those operating interprovincially, the Canadian portions of United States lines and those incorporated under federal charter. In addition, the Board assumes jurisdiction over any railway which, by Act of Parliament, has been declared to be for the general advantage of Canada. In practice, this means that apart from provincially owned railways in Ontario and British Columbia, all railways in Canada are under the Board's authority.

Once constituted, the Board became the logical body to be entrusted with the regulation of other transportation and communication agencies. The list has grown steadily and now includes express companies, telegraph companies, telephone companies other than those provincially or municipally controlled, international bridges and tunnels, inland shipping, and the recent addition of pipelines (1949). Regulation of traffic of inland-water carriers on the Great Lakes-St. Lawrence system is limited to package freight and thus excludes the important bulk traffic in grain, coal and ore.

The most recent review of transportation regulation was that undertaken by the Royal Commission on Transportation, under the chairmanship of the Honourable W. F. A. Turgeon, which held extensive hearings in 1949-50 and issued its Report in 1951. (*See* 1952-53 Year Book, p. 741.) Certain of its recommendations have been incorporated into amendments to the Railway Act and other legislation is either in effect or being put into effect. These include: the equalization of freight rates between all regions of Canada, affecting chiefly the class and commodity milage rates; the requirement that, when transcontinental competitive rates are published, the corresponding rates to intermediate points shall not be more than one-third greater than the former; the payment by the Government of Canada of the cost of maintaining the so-called 'bridge' lines of the transcontinental systems in Ontario between Sudbury, Capreol and Cochrane on the one hand and Port Arthur and Armstrong on the other, up to the amount of $7,000,000 annually, the amounts so received by the railways to be offset by certain reductions in rates between Eastern and Western Canada; the requirement of a uniform classification of accounts to be prescribed by the Board of Transport Commissioners for the Canadian Pacific

Railway and the Canadian National Railways; and the simplification of the capital structure of the Canadian National Railways involving the replacement of Government-held debt by preferred stock.

Certain other recommendations of the Commission have been put into effect or are being studied with a view to putting them into effect at an early date without any legislative amendments. These include the establishment of a uniform carload mixing rule and a general revision of the freight classification.

The Air Transport Board.—A summary of the general functions of the Air Transport Board is given in the 1952-53 Year Book, pp. 740-741, and later developments in the 1954 edition, pp. 783-784. Since its establishment in 1944, the administrative organization of the Board has been changed to meet an increasing variety of problems in the domestic and international aviation fields, but the Board itself continues to consist of three members, including the chairman. The Executive Director's Branch of the staff is divided into Legal, International Relations, and Traffic Divisions and the Secretary's Branch into Administrative, Licensing, and Inspection and Enforcement Divisions.

The Board is currently devoting special attention to problems created by new circumstances and changed conditions. Until recently the same regulations governed operations by both rotating-wing aircraft and fixed-wing aircraft but substantial regulatory amendments have now been made to facilitate commercial use of helicopters in work in which the special characteristics of this type of aircraft may be best employed. Helicopter operations are kept under constant review by an economic and technical committee set up for the purpose.

The Board has also under consideration the publication of a uniform charter tariff and the formulation of basic principles for the guidance of operators in the establishment of their rates and fares. On both proposals, the Board has invited the comments of the air carriers concerned.

In the field of international aviation, the Board has continued to take an active part in the work of the International Civil Aviation Organization (*see* p. 897) and has participated in discussions and negotiations with several countries concerning proposed new bilateral air-transport agreements and amendments to existing agreements.

Canadian Maritime Commission.—By authority of an Act (R.S.C. 1952, c. 38) passed in the 1947 session of Parliament, the Canadian Maritime Commission was constituted for the purpose of examining into, keeping records of, and advising the Minister of Transport on matters pertaining to Canadian shipping and shipbuilding services.

In addition to these duties, the Act also empowers the Commission to:—

(1) exercise and perform on behalf of the Minister such powers, duties and functions of the Minister under the Canada Shipping Act, 1934, as the Minister may require;

(2) administer, in accordance with regulations of the Governor in Council, any steamship subventions voted by Parliament; and

(3) exercise or perform any other powers, duties or functions conferred on or required to be performed by the Commission by or pursuant to any other Act or order of the Governor in Council.

PART II.—RAILWAYS*

The treatment of rail transportation is divided into three Sections dealing respectively, with steam railways, electric railways and express companies.

Section 1.—Steam Railways

The steam railway is the most important transportation agency from the standpoint of investment and of traffic handled and the statistics are, therefore, more complete for this form of transportation than for any other.

Subsection 1.—Milage and Equipment

Construction was begun in 1835 on the first steam railway in Canada—the short link of 14½ miles between Laprairie and St. Johns, Que.—but only 66 miles of railway were in operation by 1850. The first great period of construction was in the 1850's when the Grand Trunk and the Great Western Railways were built as well as numerous smaller lines. The building of the Intercolonial and the Canadian Pacific Railways contributed to another period of rapid expansion in the 1870's and 1880's. In the last period of extensive railway building from 1900 to 1917, the Grand Trunk Pacific, National Transcontinental and Canadian Northern Railways were constructed. The consolidation and organization of the Canadian National Railway System is covered at pp. 840-847.

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* Revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics. More detailed information is given in the annual reports of the Division. Certain of the financial statistics are compiled in co-operation with the Department of Transport.

1.—Steam-Railway Milage, 1900-52

Note.—Figures of total milage of single track for 1835-1909 are given in the 1941 Year Book, p. 546, and for 1911-14 in the 1954 edition, p. 786.

Total Milage (Single Track)						Milage, by Provinces				
Year	Miles in Operation	Year	Miles in Operation	Year	Miles in Operation	Type of Track and Province	1941	1949	1951	1952
	No.		No.		No.		No.	No.	No.	No.
						Single—				
1900....	17,657	1925...	40,350	1939...	42,637	N'f'ld.........	...	705	705	705
1905....	20,487	1926...	40,350	1940...	42,565	P.E.I..........	286	286	285	285
1910....	24,731	1927...	40,570	1941...	42,441	N.S...........	1,396	1,396	1,396	1,396
1915....	34,882	1928...	41,022	1942...	42,339	N.B...........	1,836	1,835	1,835	1,834
1916....	36,985	1929...	41,380	1943...	42,346	Que...........	4,789	4,791	4,789	4,830
						Ont...........	10,476	10,462	10,440	10,384
						Man...........	4,854	4,836	4,834	4,834
1917....	38,369	1930...	42,047	1944...	42,336	Sask..........	8,777	8,739	8,739	8,739
1918....	38,252	1931...	42,280	1945...	42,352	Alta..........	5,747	5,643	5,647	5,660
1919[1]....	38,329	1932...	42,409	1946...	42,335	B.C...........	3,883	3,888	3,889	3,889
1919[2]....	38,495	1933...	42,336	1947...	42,322	Yukon........	58	58	58	58
1920....	38,805	1934...	42,270	1948...	42,248	In U.S.A......	339	339	339	339
						Totals, Single..	42,441	42,978	42,956	42,953
1921....	39,191	1935...	42,916	1949...	42,978	Second..........	2,499	2,494	2,487	2,488
1922....	39,358	1936...	42,552	1950...	42,979	Industrial.......	1,551	1,925	2,068	2,130
1923....	39,654	1937...	42,727	1951...	42,956	Yard and sidings	10,210	10,437	10,639	10,720
1924....	40,059	1938...	42,742	1952...	42,953					
						Grand Totals..	**56,701**	**57,834**	**58,150**	**58,291**

[1] As at June 30 for this and previous years. [2] As at Dec. 31 for this and later years.

Total milage of single track line showed little increase during the war and post-war years because of the abandonment of certain unprofitable lines. However, three important lines have recently been completed—the 43-mile Terrace-Kitimat line in British Columbia, the 144-mile Sherridon-Lynn Lake line in Manitoba, and the 360-mile Quebec, North Shore and Labrador Railway—two others, one in northern Quebec and the other in northern Ontario, are in the planning stage (*see also* pp. 846-847). Yard and siding track and extensions serving industrial plants have been added to considerably in recent years. Of the 42,953 miles of single track operated in 1952, over 50 p.c. were Canadian National Railway lines.

Rolling-Stock.—The figures in Table 2 may be supplemented by the statement that, between 1948 and 1952, the average capacity of box cars increased from 43,402 tons to 44,712 tons, of gondola cars from 60,581 tons to 63,324 tons, flat cars from 43,190 tons to 44,081 tons, hopper cars from 56,938 tons to 61,189 tons and of all freight cars from 44,980 tons to 46,822 tons. The average tractive power of the locomotive varied but slightly over the years 1948 to 1952 with 42,051 lb. in 1948, 42,488 lb. in 1951 and 42,283 lb. in 1952. The steady growth in diesel operation is illustrated by the advance from 148 units at the end of 1948 to 763 units at the end of 1952.

2.—Rolling-Stock of Steam Railways, as at Dec. 31, 1948-52

Rolling-Stock	1948	1949[1]	1950	1951	1952
	No.	No.	No.	No.	No.
Locomotives					
Steam—					
Coal burning	4,340	4,351	3,730	3,553	3,423
Oil burning			542	555	591
Diesel electric	148	246	350	574	763
Electric	33	30	33	33	33
Totals, Locomotives	**4,521**	**4,627**	**4,655**	**4,715**	**4,810**
Passenger Cars					
First class	1,953	1,996	2,043	2,169	2,088
Second class	172	177	168		
Combination	344	337	337	339	339
Immigrant	353	347	333	315	302
Dining	186	195	196	196	183
Parlour	175	175	176	153	162
Sleeping	761	775	795	803	805
Baggage, express and postal	1,677	1,766	1,808	2,201	2,244
Motor-cars	60	54	52	49	55
Other	418	402	430	141	150
Totals, Passenger Cars	**6,099**	**6,224**	**6,338**	**6,366**	**6,328**
Freight Cars					
Automobile	5,057	6,075	6,087	6,396	7,330
Ballast	1,705	1,772	1,862	1,803	1,847
Box	118,482^{r}	118,576^{r}	116,332^{r}	121,318^{r}	121,828
Flat	10,326	10,951	11,263	11,062	11,748
Gondola	13,114	14,135	13,922	14,098	16,552
Hopper	7,996	9,100	8,903	8,897	10,083
Ore	1,923	1,902	1,954	1,902	1,878
Refrigerator	7,240	7,921	8,050	8,231	8,691
Stock	6,115	6,648	6,655	6,509	6,284
Tank	353	454	469	460	268
Other	95^{r}	80^{r}	100^{r}	49^{r}	48
Totals, Freight Cars	**172,406**	**177,614**	**175,597**	**180,725**	**186,557**

[1] Includes for the first time 46 steam and 3 diesel locomotives, 98 passenger cars, and 1,004 freight cars in service in Newfoundland.

Subsection 2.—Finances

The tables in this Subsection deal with capital liability, capital investment, earnings, operating expenses, employees and their earnings and government aid to steam railways.* Financial statistics of government-owned railways are given in Subsection 4, pp. 847-951. Other statistics of revenue in relation to traffic are included in Table **8**.

Capital Liability.—Table **3** shows capital liability of steam railways from 1933. The distinct changes shown in 1937 and 1952 were brought about by readjustments in the capital structure of the Canadian National Railways, described at pp. 844-846.

3.—Capital Liability[1] of Steam Railways, 1933-52

NOTE.—Figures for 1876 to 1925 are given in the 1927-28 Year Book, p. 649; those for 1926-32 in the 1947 edition, p. 662.

Year	Stocks	Funded Debt	Total	Year	Stocks	Funded Debt	Total
	$	$	$		$	$	$
1933...	1,438,834,552	2,951,690,468	4,390,525,020	1943...	1,614,936,131	1,741,664,036	3,356,600,167
1934...	1,437,334,152	2,966,505,594	4,403,839,746	1944...	1,636,064,822	1,707,801,676	3,343,866,498
1935...	1,433,849,530	3,026,414,779	4,460,264,309	1945...	1,631,973,055	1,701,786,899	3,333,759,954
1936...	1,425,193,791	3,062,411,720	4,487,605,511	1946...	1,624,753,709	1,665,844,138	3,290,597,847
1937[2]..	1,839,619,361	1,534,450,789	3,374,070,150	1947...	1,623,607,219	1,685,010,672	3,308,617,891
1938...	1,836,882,650	1,568,269,672	3,405,152,322	1948...	1,578,057,474	1,672,282,030	3,250,339,504
1939...	1,834,329,209	1,533,373,521	3,367,702,730	1949...	1,576,734,292	1,692,898,968	3,269,633,260[3]
1940...	1,762,473,489	1,617,561,683	3,380,035,172	1950...	1,649,462,088	1,826,346,222	3,475,808,310[3]
1941...	1,697,545,699	1,699,942,865	3,397,488,564	1951...	1,646,205,772	1,925,488,160	3,571,693,932[3]
1942...	1,578,254,765	1,793,579,270	3,371,834,035	1952[2]..	2,406,309,060	1,308,899,612	3,715,208,672[3]

[1] Does not include Canadian railway capital owned by Canadian railways. [2] *See* text above.
[3] Exclusive of approximately $40,000,000 railway debt in Newfoundland assumed in 1949.

Capital Investment.—The increase of $143,514,740 in capital liability during 1952, as shown in Table **3**, compares with an increase in investment in road and equipment of $182,473,692, as shown in Table **4**, and reflects improvements made during the year. The investment account in recent years has been affected by write-offs for lines abandoned, transfers of property to other government departments, and other factors.

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* Statistics for individual railways are given in DBS annual report, *Statistics of Steam Railways of Canada.*

4.—Capital Invested in Road and Equipment of Steam Railways, 1948-52

NOTE.—Expenditures for Newfoundland are included from Apr. 1, 1949.

Investment	1948	1949	1950	1951	1952
	$	$	$	$	$
New Lines—					
Road	1,415,132	1,428,972	6,285,165	6,301,717	11,431,609
Equipment	66,694	—	—	1,552,117	19,210
General	—	33,409	50,634	53,901	52,510
Totals	1,481,826	1,462,381	6,335,799	7,907,735	11,503,329

4.—Capital Invested in Road and Equipment of Steam Railways, 1948-52—concluded

Investment	1948	1949	1950	1951	1952
	$	$	$	$	$
Additions and Betterments—					
Road	21,725,599	25,643,350	25,523,673	42,260,214	42,243,299
Equipment	85,736,595	75,393,226	52,666,164	107,478,591	128,696,815
General	Cr. 59,483	Cr. 7,175	54,058	Cr. 70,318	70,585
Undistributed	Cr. 2,984	Cr. 3,494	3,399	Cr. 2,381	Cr. 2,539
Totals	107,399,727	101,025,907	78,247,294	149,666,106	171,008,160
Undistributed[1]	79,157,303	261,234	Cr. 2,645,822	Cr. 1,318,920	Cr. 37,797
Totals, Investment as at Dec. 31	**3,600,018,153**	**3,702,767,675**	**3,784,704,946**	**3,940,959,867**	**4,123,433,559**

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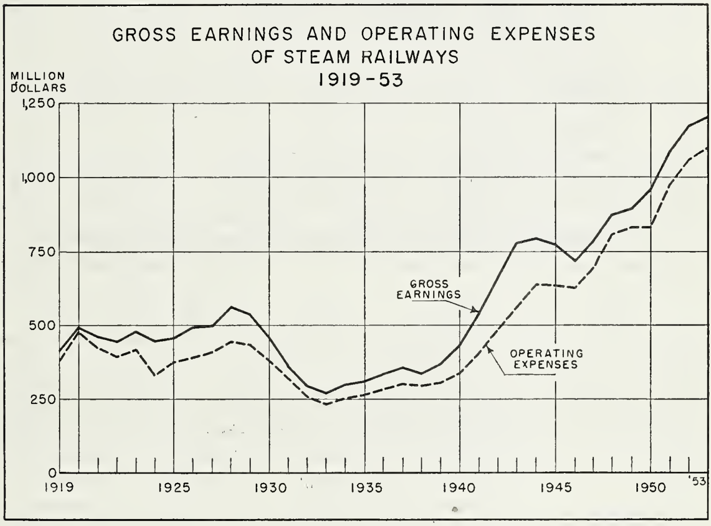
[1] Details of this item are given in DBS annual report, *Statistics of Steam Railways of Canada.*



Earnings and Expenses.—The operating ratio, or ratio of expenditure to revenue, of Canadian railways increased from about 70 p.c. to over 95 p.c. between 1917 and 1920 and remained high thereafter, owing largely to declining revenue without corresponding reductions in expenses during the depression period. The period from 1938 to 1943 showed a sharp decline in this ratio, caused primarily by increased freight traffic occasioned by World War II and a subsequent acceleration in gross earnings. A steadily rising trend since 1943 has been attributed to higher costs for materials and labour, although a decided reversal was shown for 1950 despite the nine-day strike in late August. Expenses for 1952, accounted for mainly by wage increases, show a considerable increase over the previous year,

5.—Earnings and Operating Expenses of Steam Railways, 1943-52

NOTE.—Gross earnings and operating expenses for 1875 to 1914 are given in the 1916–17 Year Book, p. 434; those for 1915–25 in the 1941 Year Book, p. 550; for 1926–39 in the 1942 Year Book, p. 585; and for 1940–42 in the 1951 Year Book, p. 722. Figures for Newfoundland are included from Apr. 1, 1949.

Year	Gross Earnings	Operating Expenses	Ratio of Expenses to Receipts	Per Mile of Line			Freight Train Revenue per Freight Train Mile	Passenger Train Revenue per Passenger Train Mile
				Gross Earnings	Operating Expenses	Net Earnings		
	$	$	p.c.	$	$	$	$	$
1943.......	778,914,565	560,597,204	71·98	18,398	13,241	5,157	6·98	3·68
1944.......	796,636,786	634,774,021	79·68	18,861	15,029	3,832	6·91	3·82
1945.......	774,971,360	631,497,562	81·49	18,331	14,937	3,394	6·92	3·70
1946.......	718,501,764	623,529,472	86·79	16,967	14,724	2,243	6·83	3·21
1947.......	785,177,920	690,821,047	87·98	18,556	16,326	2,230	7·38	3·01
1948.......	875,832,290	808,126,455	92·27	20,702	19,102	1,600	8·38	2·92
1949.......	894,397,264	831,456,446	92·96	20,866	19,398	1,468	8·66	3·10
1950.......	958,985,751	833,726,562	86·94	22,311	19,397	2,914	9·45	3·19
1951.......	1,088,583,789	977,577,062	89·80	25,348	22,763	2,585	10·05	3·36
1952.......	1,172,158,665	1,057,186,304	90·19	27,272	24,597	2,675	10·56	3·50

6.—Distribution of Operating Expenses of Steam Railways, 1949-52

Item	1949[1]		1950		1951		1952	
	$	p.c.	$	p.c.	$	p.c.	$	p.c.
Way and structures........	164,891,364	19·8	163,998,704	19·7	202,490,988	20·7	215,411,186	20·4
Equipment................	186,067,026	22·4	189,507,197	22·7	224,184,671	22·9	243,341,926	23·0
Traffic....................	17,612,056	2·1	18,591,724	2·2	19,958,080	2·1	21,297,453	2·0
Transportation............	406,033,445	48·8	403,994,207	48·5	468,653,237	47·9	504,034,668	47·7
General and miscellaneous.	56,852,555	6·9	57,634,730	6·9	62,290,086	6·4	73,101,071	6·9
Totals...............	**831,456,446**	**100·0**	**833,726,562**	**100·0**	**977,577,062**	**100·0**	**1,057,186,304**	**100·0**

[1] Includes Newfoundland railways from Apr. 1.

Employment and Salaries and Wages.—The number of railway employees increased in 1952 by 66 p.c. over 1939, and salaries and wages increased by about 234 p.c. Maintenance-of-equipment employees, on hourly rates, worked about 3 p.c. fewer hours and were paid 119 p.c. more wages per hour; average hours worked by transportation employees were 4 p.c. fewer than the 1939 average and their pay was increased by about 105 p.c. These figures reflect salary and wage increases received in 1950 and 1952 and the conversion to the five-day week in 1951.

7.—Steam Railway Employees and Salaries and Wages, 1943-52

NOTE.—Figures for 1912-39 are given in the 1941 Year Book, p. 551; for 1940-42 in the 1951 edition, p. 723. Figures for Newfoundland included from Apr. 1, 1949.

Year	Employees[1]	Total Salaries and Wages[1]	Average Salaries and Wages	Ratio of Operating Salaries and Wages (Chargeable to Operating Expenses) to—	
				Gross Earnings	Operating Expenses
	No.	$	$	p.c.	p.c.
1943	169,663	323,801,645	1,908	37·8	52·5
1944	175,095	372,064,613[2]	2,125	42·9	53·8
1945	180,603	371,814,379	2,059	43·8	53·7
1946	180,383	396,856,901	2,200	50·2	57·8
1947	184,415	429,843,142	2,331	49·9	56·7
1948	189,963	512,054,795	2,696	53·0	57·5
1949	192,366	523,453,375	2,721	52·9	56·9
1950	190,385	523,008,515	2,747	49·8	57·2
1951	204,025	624,682,754	3,062	52·0	58·0
1952	214,143	669,457,962	3,126	52·1	57·7

[1] Figures include employees or wages for "outside operations" amounting to from 3 p.c. to 6 p.c. of total employees and from 2 p.c. to 5 p.c. of total salaries and wages. [2] Includes approximately $10,000,000 in wages earned in 1943.

Government Aid to Railways.—In order that the private railways of Canada might be constructed in advance of settlement as colonization roads or through sparsely settled districts where little traffic was available, it was necessary for federal and provincial governments and even for municipalities to extend some form of assistance. The form of aid was, generally, a bonus of a fixed amount per mile of railway constructed and, in the early days, grants of land were also made other than for right-of-way.

As the country developed, the objections to the land-grant method became more apparent and aid was given more frequently in the form of a cash subsidy per mile of line, a loan or a subscription to the shares of the railway. Guarantees of debenture issues were given in a later period and, since the formation of the Canadian National Railways, all debenture issues of that System, except those for rolling-stock, have been guaranteed by the Federal Government. No new land grants or cash subsidies have been advanced by either the federal or provincial governments since 1939.

During the era of railway expansion before 1918, provincial governments guaranteed the bonds of some railway lines that afterwards were incorporated in the Canadian National Railway System. These bonds as they mature or are called are paid off by the Canadian National Railways, in large measure, through funds raised by the issue of new bonds with Federal Government guarantee. Bonds guaranteed by the Governments of Ontario, Manitoba, Saskatchewan, Alberta and British Columbia have been eliminated in this manner in recent years. The only provincially guaranteed railway bonds outstanding at Dec. 31, 1952, were those of the Government of New Brunswick to the amount of $465,000. Federal Government guarantees at the same date amounted to $511,411,723: this amount does not include $6,984,883 perpetual debenture stock and guaranteed stock of the former Grand Trunk Railway, now part of the Canadian National Railway System, on which interest and dividends are guaranteed by the Federal Government.

Subsection 3.—Traffic

Table 8 shows the passenger and freight statistics for all steam railways for the years 1943-52. A separate analysis of the operations and traffic of the Canadian National Railways is given at pp. 848-851.

8.—Statistics of Passenger and Freight Services and Revenue Receipts, 1943-52

Note.—Figures for 1910-42 are given in the corresponding table of previous Year Books.

Year	Passenger				
	Revenue Passenger-Train Miles[1]	Passenger-Train Car Miles[1]	Passengers Carried[2]	Passengers Carried One Mile	Passengers Carried One Mile per Mile of Line
	No.	No.	No.	No.	No.
1943	45,745,039	433,828,200	57,175,840	6,525,064,000	154,122
1944	46,575,706	450,042,986	60,335,950	6,873,188,000	162,729
1945	47,067,607	447,822,527	53,407,845	6,380,155,000	150,917
1946	45,700,856	415,890,589	43,405,177	4,648,558,000	109,773
1947	45,367,725	398,646,636	40,941,387	3,732,777,000	88,218
1948	46,101,568	410,689,409	38,279,981	3,477,273,000	82,193
1949	45,680,009	407,421,229	34,883,803	3,193,174,337	74,497
1950[3]	43,744,164	392,800,555	31,139,092	2,816,154,232	65,519
1951	46,200,947	415,178,734	30,995,604	3,110,240,504	72,424
1952	47,663,617	431,234,562	30,167,145	3,151,261,385	73,319
	Average Receipts per Passenger Mile	Average Receipts per Passenger	Average Passenger Journey	Average Passengers per Train	Passenger-Train Revenue per Passenger-Train Mile
	cts.	$	miles	No.	$
1943	1·90	2·16	114	143	3·68
1944	1·92	2·18	114	148	3·82
1945	1·96	2·34	120	136	3·70
1946	2·15	2·30	107	102	3·21
1947	2·35	2·14	91	82	3·01
1948	2·40	2·18	91	75	2·92
1949	2·66[3]	2·44[3]	92[3]	69	3·05
1950[3]	2·79	2·52	90	64	3·19
1951	2·86	2·87	100	67	3·36
1952	2·88	3·00	104	66	3·50
	Freight				
	Revenue Freight-Train Miles	Revenue Freight-Train Car Miles[4]	Freight Carried[5]	Freight Carried One Mile	Freight Carried One Mile per Mile of Line
	No.	No.	tons	tons	tons
1943	81,443,279	3,132,419,669	153,314,264	63,915,074,000	1,509,674
1944	83,564,629	3,297,475,933	155,326,332	65,928,078,000	1,560,908
1945	80,712,589	3,189,311,345	147,348,566	63,349,095,000	1,498,465
1946	77,794,963	2,973,411,653	139,256,125	55,310,308,000	1,306,121
1947	82,377,565	3,176,646,828	152,855,820	60,143,035,000	1,421,384
1948	83,398,617	3,120,704,440	154,932,804	59,080,323,000	1,396,500
1949	81,648,053	3,091,633,447	142,719,431[3]	56,338,230,000[3]	1,314,379[3]
1950[3]	81,397,148	3,093,946,961	144,218,319	55,537,900,000	1,292,120
1951	87,181,640	3,384,341,192	161,260,521	64,300,418,000	1,497,274
1952	89,217,123	3,551,802,171	162,175,381	63,430,417,000	1,592,146

For footnotes, *see* end of table.

8.—Statistics of Passenger and Freight Services and Revenue Receipts, 1943-52—concluded

Year	Freight—concluded					
	Freight Receipts per Ton per Mile	Receipts per Ton Hauled	Average Length of Freight Haul	Average Train Load, Revenue Tons	Average Load per Loaded Car Mile	Revenue per Freight-Train Mile
	cts.	$	miles	tons	tons	$
1943	0·890	3·71	417	785	32·75	6·98
1944	0·876	3·72	424	789	32·70	6·91
1945	0·882	3·79	430	785	32·57	6·92
1946	0·961	3·82	397	711	29·95	6·83
1947	1·009	3·98	393	730	30·23	7·38
1948	1·183	4·51	381	708	30·16	8·38
1949	1·256[3]	4·96[3]	395[3]	689	29·65	8·62
1950[3]	1·385	5·33	385	682	28·91	9·45
1951	1·362	5·43	399	738	30·61	10·05
1952	1·377	5·81	422	767	31·68	10·56

[1] Includes express, baggage, mail and other cars. [2] Duplications included. [3] Newfoundland included for this and subsequent years. [4] Includes caboose miles but excludes miles made in passenger and non-revenue trains. [5] Duplications eliminated; *see* Table 9 for details of freight carried.

Revenue freight carried by the railways in 1952 showed little change over 1951. The decreases registered by the animal, mine, forest products, and manufactures and miscellaneous groups were counterbalanced by a substantial increase in the agricultural group. The principal commodities showing an increase over 1951 were wheat, oats, sand and gravel, stone, and gasoline and petroleum products.

9.—Commodities Hauled as Freight on Steam Railways, 1948-52

Note.—In this table duplications are eliminated, i.e., the same freight handled by two or more railways is counted only once. The statistics do not include the United States lines of the Canadian National Railways, but the link of the Canadian Pacific Railway line across Maine, U.S.A., is included, as are the Canadian sections of United States railways.

Commodity Group and Products	1948	1949[1]	1950	1951	1952
	tons	tons	tons	tons	tons
Agricultural Products					
Wheat	11,221,579	12,861,460	10,180,638	15,444,631	19,026,645
Oats	2,356,099	2,523,349	1,998,361	2,679,391	3,219,709
Other grain	4,514,027	4,195,518	3,430,079	4,703,796	6,465,472
Flour	2,302,510	2,012,513	1,996,281	2,222,861	2,233,819
Other mill products	2,853,657	2,463,699	2,479,974	2,565,747	2,584,815
Other agricultural products	4,408,579	4,233,782	4,290,525	4,122,972	3,872,313
Totals, Agricultural Products	**27,656,451**	**28,290,321**	**24,375,858**	**31,739,398**	**37,402,773**
Animal Products					
Live stock	1,153,196	976,565	907,046	759,169	679,624
Meats and other edible packing-house products	942,278	894,266	764,040	815,267	496,038
Other animal products	793,995	668,644	631,139	621,891	518,028
Totals, Animal Products	**2,889,469**	**2,539,475**	**2,302,225**	**2,196,327**	**1,693,690**

For footnotes, *see* end of table, p. 838.

9.—Commodities Hauled as Freight on Steam Railways, 1948-52—concluded

Commodity Group and Products	1948	1949[1]	1950	1951	1952
	tons	tons	tons	tons	tons
Mine Products					
Coal, anthracite	5,675,849	4,099,390	4,481,323	4,110,389	3,879,154
Coal, bituminous	16,587,478	13,946,461	15,058,571	14,505,205	13,796,988
Coal, sub-bituminous	2,426,229	2,340,378	2,400,271	2,151,652	2,090,353
Coal, lignite	1,272,774	1,521,762	1,787,973	1,802,473	1,641,374
Coke	2,141,063	1,805,620	1,899,872	2,223,652	2,145,360
Ores and concentrates	11,187,732	11,715,952	12,312,946	13,284,529	12,876,555
Base bullion, matte, pig and ingot (non-ferrous metals)	1,457,668	1,330,464	1,427,581	1,446,910	1,428,033
Sand and gravel	3,556,854	3,118,677	3,582,966	3,900,617	4,503,818
Stone (crushed, ground, broken)	2,989,724	2,629,652	2,788,301	3,486,464	3,903,012
Other mine products	9,437,571	9,233,094	10,008,616	9,143,215	8,557,285
Totals, Mine Products	**56,732,942**	**51,741,450**	**55,748,420**	**56,055,106**	**54,821,932**
Forest Products					
Logs, posts, poles, piling	1,582,800	1,439,447	1,350,064	1,832,259	2,372,333
Cordwood and other firewood	623,070	457,848	440,306	355,213	282,089
Pulpwood	8,995,154	6,555,770	5,521,412	9,970,231	8,663,783
Lumber, timber, box, crate and cooperage material	7,514,232	6,418,854	7,778,428	7,867,659	7,153,936
Other forest products	727,113	724,479	740,129	810,555	858,016
Totals, Forest Products	**19,442,369**	**15,596,398**	**15,830,339**	**20,835,917**	**19,330,157**
Manufactures and Miscellaneous					
Gasoline and petroleum products	5,670,944	5,806,468	6,226,127	6,722,065	7,460,770
Iron and steel (bar, sheet, structural pipe)	2,989,652	2,720,250	2,633,274	3,501,728	3,454,358
Automobiles, trucks and parts	2,162,322	2,102,622	2,517,930	2,456,566	2,302,126
Newsprint	3,809,313	3,747,561	3,844,113	4,056,679	4,010,699
Pulp	2,311,901	1,791,868	2,311,057	2,750,103	2,178,170
Other manufactures and miscellaneous	27,160,763	24,770,961	25,099,776	27,725,675	26,654,758
Merchandise[2] (all L.C.L. freight)	4,106,678	3,612,057	3,329,200	3,220,957	2,865,948
Totals, Manufactures and Miscellaneous	**48,211,573**	**44,551,787**	**45,961,477**	**50,433,773**	**48,926,829**
Grand Totals	**154,932,804**	**142,719,431**	**144,218,319**	**161,260,521**	**162,175,381**

[1] Figures for Newfoundland are included from Apr. 1, 1949. [2] Less than carload lots.

Railway Accidents.—In Tables **10** and **11** all passengers injured are included in the figures but, for employees, only injuries are recorded that keep the employee from his work for at least three days during the ten days following the accident.

10.—Passengers, Employees and Others Killed or Injured on Steam Railways, 1943-52

Note.—Figures for 1919–42 are given in the corresponding tables of previous Year Books beginning with the 1922–23 edition.

Year	Passengers		Employees		Others[1]		Totals	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
	No.	No.	No.	No.	No.	No.	No.	No.
1943	9	546	130	12,667	202	706	341	13,919
1944	8	562	103	13,187	242	630	353	14,379
1945	10	499	98	13,147	246	705	354	14,351
1946	3	526	105	11,406	219	706	327	12,638
1947	35	464	103	10,620	262	755	400	11,839
1948	15	351	99	9,980	271	825	385	11,156
1949[2]	1	316	71	8,794	257	824	329	9,934
1950	18	297	67	8,108	232	744	317	9,149
1951	5	221	84	7,651	301	723	390	8,595
1952	2	183	74	7,019	317	707	393	7,909

[1] Includes trespassers walking along tracks, stealing rides, etc., and persons crossing tracks at level crossings. [2] Figures for Newfoundland are included from Apr. 1, 1949.

Accidents tabulated include all those in which railway trains were involved and accidents on railway property. The classification of accidents used for DBS vital statistics treats collisions between motor-vehicles and trains as motor-vehicle accidents; provincial statistics also class them as motor-vehicle accidents and, consequently, adjustments should be made when compiling total accidental deaths of all kinds or comparing results of accidents of different kinds, such as train and motor-vehicle.

11.—Persons Killed or Injured on Steam Railways, by Specified Cause, 1950-52

Class of Person and Description of Accident	1950		1951		1952	
	Killed	Injured	Killed	Injured	Killed	Injured
	ACCIDENTS RESULTING FROM MOVEMENT OF TRAINS, LOCOMOTIVES OR CARS					
Class of Person—	No.	No.	No.	No.	No.	No.
Passengers	18	262	4	191	2	125
Employees	54	2,244	69	2,341	61	2,430
Trespassers	81	82	77	83	100	82
Non-trespassers	146	484	209	493	208	481
Postal clerks, expressmen, etc	—	26	3	19	4	38
Totals	**299**	**3,098**	**362**	**3,127**	**375**	**3,156**
Description of Accidents (Employees and Passengers only)—						
Coupling and uncoupling	2	103	7	103	2	106
Collisions	37	263	21	166	28	195
Derailments	5	35	7	54	5	38
Locomotives or cars breaking down	1	3	1	4	—	1
Falling from trains or cars	5	100	5	157	4	176
Getting on or off trains	2	507	3	542	1	533
Struck by trains, etc	15	51	21	53	12	36
Overhead and other obstruction	1	28	—	32	1	25
Other causes	4	1,416	8	1,421	10	1,445
Totals	**72**	**2,506**	**73**	**2,532**	**63**	**2,555**
	ALL OTHER ACCIDENTS					
Class of Person—	No.	No.	No.	No.	No.	No.
Stationmen	1	756	1	773	—	663
Shopmen	6	2,218	4	1,885	2	1,682
Trackmen	2	2,266	7	1,993	9	1,674
Other employees	4	624	3	659	2	570
Passengers	—	35	1	30	—	58
Others	5	152	12	128	5	106
Totals	**18**	**6,051**	**28**	**5,468**	**18**	**4,763**

Subsection 4.—The Canadian National Railway System

In view of the interest in Canada's publicly owned railway, the Canadian National Railway System is given separate treatment in this Subsection. Its history is presented in the following special article.

THE HISTORY OF THE CANADIAN NATIONAL RAILWAYS

The Chapter on National Transportation Policy of the Report of the Royal Commission on Transportation (1951) includes the following statement:—

> *Canada, more by accident than by design, became the owner of what is today one of the largest railway systems in the world. This came about because the Federal and Provincial Governments had guaranteed the obligations of the railway companies which were later to become amalgamated into the Canadian National Railways System.*

The Canadian National Railways System had its origin in Canada's first railway, the 14½-mile Champlain and St. Lawrence which began operations in 1836 between Laprairie and St. Johns, Que. The System now embraces this pioneer railway and many other short and long rail lines built in different parts of the country at different times and for different purposes. It is the corporate successor to the Grand Trunk, the Intercolonial, the Canadian Northern, the National Transcontinental and Grand Trunk Pacific Railways.

The Grand Trunk Railway was incorporated by Act of Parliament in 1852 to develop a railway system from Portland, on the United States Atlantic seaboard, through Montreal, Toronto, Stratford and Sarnia to Detroit, with an intended eventual extension to Chicago.

While the Grand Trunk toiled towards its objective, considerable railway activity prevailed in Nova Scotia and New Brunswick, although it embraced more ambition than actual construction. However, the British North America Act of 1867 stipulated that the newly constituted Dominion Government must build a railway connecting Halifax with the St. Lawrence at or near Quebec, and that the line should be started within six months of the date of Confederation. Surveys—some already started—were pressed to conclusion and construction of the Intercolonial Railway began immediately under the supervision of Sir Sandford Fleming.

Controversy developed over the route through New Brunswick. Three possible routes were available: northerly along the Baie de Chaleur; a central route; and a southerly route along the St. John River Valley. The northern route was chosen for military and economic reasons although it was longest and most expensive to build. The Government of Nova Scotia had already built a line from Halifax to Truro and the Grand Trunk had been built as far east as Rivière-du-Loup; the northerly route would therefore connect Truro and Rivière-du-Loup. The Intercolonial Railway was officially opened for traffic between Halifax and Lévis on July 1, 1876.

In 1879, the Intercolonial bought from the Grand Trunk the line from Rivière-du-Loup to Chaudière, the Grand Trunk reserving running rights from Chaudière to Point Lévis, opposite Quebec City. In 1897, Intercolonial secured running rights over the Grand Trunk to Montreal and thus established a through route from Halifax and Saint John to Montreal. The Prince Edward Island Railway was built by the Provincial Government between 1871 and 1873 and became the property of the Dominion Government when the Island entered Confederation on July 1, 1875. It was thenceforward operated as part of the Intercolonial Railway.

The Intercolonial Railway was not built primarily as a commercial venture but rather to serve the political and economic needs of the country. It was built at high cost for the purpose of handling, speedily and efficiently, the traffic between the Maritimes and Quebec. Though it was never a financial success, its construction did much to strengthen the bonds of Confederation and also served a most useful purpose in developing the country.

The Grand Trunk Railway, meanwhile, had completed the Montreal-Portland section of its line in 1853, and by 1860 was complete from Montreal to Sarnia. In 1860, also, the Chicago, Detroit, and Canada Grand Trunk Junction Railway, extending from Sarnia to Detroit, was acquired by the Grand Trunk on perpetual lease. In 1880, through acquisition of certain lines and construction of connecting sections, the Grand Trunk had succeeded in acquiring its own line to Chicago, giving it, at last, a through route from Portland, Maine.

In the eight years immediately following the completion of the Portland-Chicago route, the Grand Trunk, by pursuing a policy of purchasing practically all competing railroads, developed a network of lines covering Ontario. These lines were sufficient to form a compact railway empire and to promise lucrative earnings until early in the twentieth century, when the great stream of migration began to flow into the prairie regions west of the Great Lakes. Traffic, both passenger and freight, began in large volume and the Grand Trunk Railway, by reason of the restricted area in which it was operating, found itself virtually shut out from all this remunerative long-haul traffic. Inevitably, the directors reached the conclusion that a line should be built through Western Canada. The route proposed to the Government extended westward from North Bay, north of Lake Superior to a system of branch lines on the prairies, with an extension to the Pacific Coast. The Government, however, maintained that if such a line were constructed, the Grand Trunk would divert the through traffic to Portland, Maine, instead of to the Canadian ports of Halifax and Saint John.

An agreement was eventually negotiated by which the Grand Trunk undertook to organize the Grand Trunk Pacific Railway Company—capital stock of which would be completely owned by the Grand Trunk Railway Company—which would build and maintain a main line of railway extending from Winnipeg to the Pacific Coast with a system of branch lines throughout the Prairie Provinces. The Dominion Government agreed to build a railway to be called the National Transcontinental Railway to extend from Moncton, N.B., to Winnipeg, Man., which, upon completion, would be leased to the Grand Trunk Pacific Railway for a number of years at an agreed percentage of the cost of construction. It was also agreed that the Grand Trunk Pacific would construct a branch line from Lake Superior, at or near Fort

William, to a junction with the National Transcontinental; this line would be called the Lake Superior Branch. The agreement was ratified by an Act of Parliament passed in 1903 (S.C. 1903, c. 71).

Construction of both the Grand Trunk Pacific and the National Transcontinental began in 1905. Work on the Grand Trunk Pacific proceeded both from Winnipeg, Man., and Prince Rupert, B.C., the railway's main line being divided into two Sections—the Prairie and the Mountain. The railway from Winnipeg to the Pacific Coast was completed in the autumn of 1914, and the branch line, for the handling of grain traffic via the Great Lakes, was built from Sioux Lookout on the National Transcontinental to Fort William, Ont. The Grand Trunk Pacific was formally opened to traffic on Jan. 1, 1916.

The National Transcontinental began construction of its line to Winnipeg from Moncton, in 1905. When the line was completed in 1915 the Government looked to the Grand Trunk Pacific to carry out its contract and take over the National Transcontinental for operation. The Grand Trunk Pacific then claimed that, owing to excessive cost of constructing the new lines and its own poor financial condition, it was not in a position to fulfil its obligations. After lengthy negotiations with the Grand Trunk Railway Company of Canada and the Grand Trunk Pacific, the Dominion Government decided to take over the operation of the National Transcontinental. Thus, the National Transcontinental Railway was operated from June 1, 1915, by the same management as the Canadian Government Railways. On Nov. 20, 1918, its operation was entrusted to the Board of Directors of the Canadian Northern Railway.

The Canadian Northern Railway owed its inception to the joint enterprise of two men, Sir William Mackenzie and Sir Donald Mann, who, in 1896, secured the charter of the Lake Manitoba Railway and Canal Company for a line extending from Gladstone to Winnipegosis, both in the Province of Manitoba. The following year, they started construction of a railway running from Winnipeg southeasterly towards the head of the Great Lakes, under charter of the Manitoba and South-eastern Railway. About the same time, they also began construction of the Ontario and Rainy River Railway, westerly from Port Arthur. After 1899, these various companies became known as the Canadian Northern Railway. The Minnesota and Manitoba Railway was chartered to build a connecting link through the 'North West Angle', the northern tip of the State of Minnesota, U.S.A.

The original intention of the Canadian Northern was to build a line from the head of the Lakes to Winnipeg and to the northern section of Manitoba, and through the then North-West Territories to Prince Albert and Edmonton. In 1901, a branch line was projected from Dauphin west to Gilbert Plains and in 1903 the management revised its original intention of building the line through Prince Albert and decided to continue its Dauphin line—via Grandview—through the more central section of the North-West Territories to Edmonton. Construction work on the main line proceeded vigorously, so that by June 30, 1910, the Canadian Northern system had 3,281 miles in active operation west of Lake Superior.

After completion of its primary objective, the Canadian Northern decided to push eastward from Port Arthur, Ont., and westward from Edmonton, Alta., and to become truly a transcontinental system. Subsidiary companies were formed under whose charters construction of these extensions was commenced and carried forward until early in 1914.

The financing of the Canadian Northern had been accomplished largely through government guarantees; in the early stages by the Provincial Governments and later by the Dominion Government. As the Company grew in importance, it reached the stage where it could use its own credit for financing and thereby raised large sums of money by the issue of perpetual debenture stock and convertible income charge debentures. However, because of the outbreak of World War I and owing to the financial stringency prevailing at that time, the Canadian Northern, Grand Trunk and Grand Trunk Pacific were unable to meet previous commitments. The Dominion Government thereupon appointed a Royal Commission to investigate the general railway situation in Canada.

The Royal Commission was appointed in 1916, under the Chairmanship of A. H. Smith, then President of the New York Central Railroad, and included Sir Henry Drayton, then Chairman of the Board of Railway Commissioners, and A. C. Acworth, an authority on English railways. The Commission was called upon to report on the status of Canada's three transcontinental railways, the reorganization considered necessary, and the best method of procedure should one or more lines be acquired by the Government.

In 1917, Sir Henry Drayton and A. C. Acworth presented to Parliament the Drayton-Acworth majority report, recommending that the Government take over the Grand Trunk, Grand Trunk Pacific, and Canadian Northern Railways and operate them, together with the Intercolonial and National Transcontinental, as one system. The Commission had come to this conclusion—though it pointed out the objections to such a government-operated system—because this appeared to be the only manner in which maintenance of adequate rail transportation could be assured, dislocation of Canadian credit avoided, and Government investment protected. A. H. Smith presented a minority report dissenting from the majority report.

The Commission's majority report was accepted by the Government and, in 1917, a Bill was introduced in Parliament implementing its recommendations and providing for the taking over of the Canadian Northern by the Canadian Government. In September 1918, the Government appointed a new Board of Directors charged with the operation of the Canadian Northern Railways. In November 1918, the management of the Canadian Government Railways was entrusted to the Board of Directors of the Canadian Northern Railway Company and in December of the same year, the use of the collective title "Canadian National Railways" was authorized.

It was recognized that, because of the interrelations of the Grand Trunk with the Grand Trunk Pacific, further study would have to be made before these railways could be absorbed into the newly-founded system, and negotiations were entered into with the Grand Trunk to determine the basis upon which the Government would acquire its properties.

In February 1919, the Grand Trunk notified the Government that it would not continue to operate the Grand Trunk Pacific after Mar. 10, and the Government, in consequence, appointed the Minister of Railways as receiver for it. In 1920, its management was entrusted to the Board of Directors appointed for the Canadian Northern Railway Company which operated it under receivership until the latter was terminated on May 27, 1927, and control was vested in the Canadian National Railways.

The final agreement covering the acquisition of the property of the Grand Trunk by the Government was reached in October 1919, and a Board of Arbitration was appointed to estimate the value of the preferred and common stock of the Company. A Board of Management, under the Chairmanship of Sir Joseph Flavelle, operated the property until Jan. 30, 1923, when formal amalgamation with the Canadian National Railway Company took place with Sir Henry Thornton as Chairman and President.

This then was the Canadian National Railways—a group of insolvent railways having a burden of interest debt that can be described only as fantastic: so much so, that the management of the day was faced with an apparently hopeless prospect financially. The component lines as a group could not even meet their operating expenses. The average annual operating loss for the five years preceding consolidation was over $9,000,000 and other income charges brought the figure close to $12,000,000. In addition, the new system was expected to carry a staggering burden of interest charges on the debt inherited from the predecessor companies.

Large expenditures were needed to co-ordinate the various lines and bring them to the standard required for efficient operation, yet there was no way of securing the necessary funds other than by borrowing from the public or the Government and this borrowing again increased the annual interest charges. Although the Dominion Government owned all the railways comprising the CNR, the money provided by the Government took the form of a loan on which fixed interest was payable. The Government took on the role of banker—or creditor—as well as that of proprietor; the Canadian National, in turn, was required to carry a crippling load of fixed interest charges on its borrowings, though it had only a low earning capacity to meet them initially. The Government, aware of the financial problems of the Railway, introduced legislation in 1932 whereby deficits would be met through a vote by Parliament instead of money being loaned at interest to the Railway.

In 1937, steps were taken to readjust the capital structure of the Railway. The CNR Capital Revision Act of that year wrote off all loans that had been made to cover deficits and also unpaid interest on those loans. The Act also cancelled the Grand Trunk and Canadian Northern stock that had been declared worthless by the Board of Arbitration in its 1921 report. The only portion of this Act that had any direct bearing on the Railway's fundamental program of abolishing fixed interest on day-to-day operations, was the clause whereby certain moneys, in the form of loans made for the purpose of additions and betterments, were converted to equity capital, relieving the CNR from paying fixed charges on this amount; this was the principal advantage of the legislation. However, contrary to popular belief, none of the money invested by the Government in the Company itself was written off by the 1937 Act, nor was there any reduction of the interest-bearing debt in the hands of the public.

It was on the basis of this average debt that the Canadian National Railways sought relief from fixed interest charges in its submission to the Royal Commission on Transportation in 1950. The Commission had been appointed in 1948, by Order in Council P.C. 6033, to review the capital structure of the Canadian National Railways and report on the advisability of establishing and maintaining the fixed charges of that Company on a basis comparable to other major railways in North America.

The Canadian National Railways, in its initial brief to the Commission, proposed that the portion of its bonded indebtedness held by the Government should be converted to equity capital and to provide relief in respect to the lines operated in the public interest, the publicly held bonded indebtedness of the Canadian National Railways should be assumed in whole or in part by the Government or, alternatively, relief should be provided by such other action as could best be adapted to the needs of the situation. Later, Mr. Donald Gordon, Chairman and President of the Company, submitted that the $760,000,000 interest-bearing obligations held by the Government should be exchanged for equity capital and reflected in the balance sheet as such. He also asked that the Government acknowledge an indebtedness to the Canadian National Railways in the amount of $300,000,000 to bear interest at 3 p.c. until discharged. This would be set up in the accounts of the CNR as a capital fund to be drawn on from time to time to retire interest-bearing obligations in the hands of the public or for capital additions to the property. As a consideration for the acknowledgment of the indebtedness, the CNR would issue a commensurate amount of equity stock to the Government. It was also submitted that development lines be financed by not more than 60 p.c. in the form of interest-bearing securities, the balance to be supplied by the Government against the issue by the CNR of a commensurate amount of equity stock to the Government. The Board of Directors of the Canadian National Railways considered that nothing short of these measures could be deemed adequate treatment of the capital structure of the Railway. The reasons for this stand were that the Railway, burdened with excessive fixed charges, was obliged to operate without due compensation as a matter of national policy and as an instrument of national development; further, that it possessed considerable milage of marginal and non-paying lines, and that railway tariffs of rates and tolls had not kept pace with increased costs of labour and materials.

The Royal Commission concluded that the Canadian National Railways had established a case for reduction of fixed charges and for the desirability of the Company being able to accumulate a reserve out of earnings. The Commission recommended relief from the present heavy fixed charges so that deficits would not be experienced under efficient management when normal revenues are obtained; the accumulation out of earnings, when available, of some reserve, or what has come to be known as "something to come and go on" to provide additions and betterments; the payment to the Government of the balance, after interest charges on debts to the public and provision for a reasonable reserve had been made.

The Canadian National Railways Capital Revision Act was introduced in the House of Commons on June 4, 1952. The Act changed 50 p.c. of the Company's interest-bearing debt to preferred stock on which, after settling income taxes, a dividend of 4 p.c. would be paid on earnings; furthermore, for a term of 10 years ending Dec. 31, 1961, the Railway is not obliged to pay interest on $100,000,000 of its long-term debt. The Act made provision for the Government to buy additional preferred stock annually in amounts related to the Company's gross revenues.

What the Act did not do is also important. It did not write off any of the money invested in the CNR. Nor did it guarantee freedom from deficits: at Dec. 31, 1953, $28,000,000 of annual interest charges remained on the Railway's books. The Act has no direct effect on the taxpayer, but goes a long way towards correcting the impression that the CNR has been losing money on its current operations and is a burden to the taxpayer.

In Canada, the geographic location of newly discovered mineral wealth has been a main factor in the close relation between the Canadian National Railways and industry. Mineral discoveries have sparked a new phase of railway building; new, because machinery—bulldozers, steam shovels and power tools—has taken the place of the hand labour employed by the railway pioneers.

The Canadian National Railways first post-war venture into the field of railway building was the 40-mile extension from Barraute to Beattyville. This was the first step in a move to eventually tap the extensive mineral deposits and forest reserves of the northern Quebec area. Surveying of this line began in 1946 and construction was completed in 1949.

In 1952, Parliament authorized the Canadian National Railways to build a 43-mile line to Kitimat, B.C., to serve the Aluminum Company of Canada's new smelter. The terrain over which the line was built was rugged and the engineering problems were typical of those which had been encountered in the construction of the mountain section of the transcontinental line. The largest bridge on the line is the seven-span 1,018-foot steel bridge over the turbulent Skeena River, near Terrace. Within a few years this new line will be carrying the necessities of life to a city of 50,000 to 60,000 people. At the same time it is opening up new fields for loggers and lumbermen in virgin timber stands and, it is expected, will play an important role in the development of the whole area.

An important mineral discovery in a remote area of northern Manitoba necessitated the construction of a 144-mile rail line from Sherridon to Lynn Lake where Sherritt-Gordon Mines Limited is now working valuable nickel and copper ore deposits. When in the early 1940's, Sherritt-Gordon found that the copper and zinc mines at Sherridon were running out, prospectors were dispatched to comb the northern hinterlands for new ore bodies. Deposits were discovered in 1941 at Lynn Lake, near the Saskatchewan border, 500 miles northwest of Winnipeg and 120 air-miles due north of Sherridon. However, the multi-million-dollar project of moving the entire town of Sherridon to the Lynn Lake site, constructing a 7,000-h.p. power plant and the new mine buildings, was not started until after World War II.

The CNR surveyed the new line in 1951 and awarded contracts for clearing and grading the right-of-way. Equipment, needed for construction of trestles and track-laying were transported over the frozen wastes during the winter of 1951-52 and actual track laying began on Aug. 7, 1952. The first train, powered by a diesel locomotive and carrying supplies for the town and the mine, reached Lynn Lake on Nov. 7, 1953. The 144 miles of track had been laid in exactly 15 months.

At peak production, more than 77,800 tons of nickel concentrates and 12,300 tons of copper concentrates will be shipped from Lynn Lake annually—the nickel concentrates to Fort Saskatchewan, on the outskirts of Edmonton, Alta., where plentiful resources of natural gas are available for the refining process, and the copper concentrates to Noranda, Que. The line will also handle the fish traffic from Reindeer Lake and other large northern lakes, and supplies of fuel and equipment required to serve the mine and the town of Lynn Lake and the many trading posts in the territory will constitute the inbound traffic.

Plans for two other rail extensions are being put into final form. The potential mineral and forest wealth at Chibougamau in northern Quebec is to be tapped and a new railway constructed from Beattyville, the present terminal of the Barraute line, to Cache Lake, a distance of 149 miles. From Cache Lake, the line will extend six miles due north to Chibougamau. The eastern arm of the line will link the region to St. Felicien in the Lake St. John district.

Another line will open up the Manitouwadge area of northwestern Ontario where rich deposits of copper, zinc and silver have recently been found. The line will run from Hillsport on the CNR main line, 42 miles west of Hornepayne, in a southerly direction to Lake Manitouwadge, a distance of approximately 27 miles. It is expected that the Manitouwadge area will produce ore at the rate of 10,000 tons a day and involve inbound traffic estimated at 60,000 tons annually.

Although aircraft is playing an important role in the discovery of new resources in the outlying areas of Canada and in their initial development, the provision of railway services is absolutely essential to the continuing life of such projects. Only the railway can provide a permanent, dependable and economical link with the markets in the better developed areas of Canada.

Financial Statistics of the Canadian National Railway System.*—*Capital Structure and Debt.*—Major changes resulting from the Canadian Railways Capital Revision Act, 1952, were:—

(1) $736,385,405 of interest-bearing debt to the Federal Government, which represented 50 p.c. of the borrowed capital outstanding on Dec. 1, 1951, was exchanged for Canadian National Railway Company 4 p.c. non-cumulative preferred stock. Dividends on the 4 p.c. preferred stock must be paid to the extent that earnings are available after income tax has been paid.

(2) Outstanding loans from the Federal Government to the amount of $100,000,000 were converted into a $3\frac{5}{8}$ p.c. 20-year debenture which is to mature Jan. 1, 1972. No interest is payable on this debenture for the first 10 years.

(3) Capital stock of the Canadian National Securities Trust in the amount of $378,518,135 was transferred to the Canadian National Railway Company in exchange for a like amount of the Company's capital stock.

(4) In each of the years 1952 to 1960, inclusive, the Federal Government will purchase 4 p.c. preferred stock in amounts equal to 3 p.c. of the annual gross revenues, these funds to be used by the Railway for financing capital improvements.

As a consequence of these adjustments, the proportion of total capitalization represented by equity capital in shareholder's account was raised from 34·5 p.c. at Dec. 31,1951, to 67·2 p.c. at Jan. 1, 1952, and the proportion of borrowed capital was correspondingly reduced. It will be noted that these percentages are calculated exclusive of the $1,518,890 of capital stock of subsidiary companies which was held by the public on the above dates.

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* The Hudson Bay Railway is a direct responsibility of the Federal Government and has been operated by the CNR for the Government since Apr. 1, 1935; statistics relating to the operation of this line are not included in the data for the CNR.

The following statement shows the effect of the Act on the capitalization of the Company:

CAPITALIZATION OF THE CANADIAN NATIONAL RAILWAYS

Item	*Balance at Dec. 31, 1951*	*Year 1952 Adjustments Effective Jan. 1, 1952, under Capital Revision Act, 1952*	*Year 1952 Current Transactions*	*Balance at Dec. 31, 1952*
	$	$	$	$
EQUITY CAPITAL—				
Capital stock of Canadian National Railway Company	18,000,000	378,518,135[1]	—	396,518,135
Capital stock of the Canadian National Railways Securities Trust	378,518,135	−378,518,135[1]	—	—
4 p.c. preferred stock of Canadian National Railway Company	—	736,385,405[2]	18,486,540	754,871,945
Capital investment of Government of Canada in the Canadian Government Railways	379,877,514	—	−195,270	379,682,244
GOVERNMENT OF CANADA—SHAREHOLDERS' ACCOUNT	776,395,649[3]	736,385,405	18,291,270	1,531,072,324[3]
Per cent of capitalization	34·5	—	—	64·75
BORROWED CAPITAL—				
Funded debt	615,197,035	—	−9,702,206	605,494,829
Government of Canada loans and debentures	857,573,774	−736,385,405[2]	106,866,796	228,055,165
TOTALS, BORROWED CAPITAL	1,472,770,809	−736,385,405	97,164,590	833,549,994
Per cent of capitalization	65·5	—	—	35·25
TOTALS, CAPITALIZATION	2,249,166,458[3]	—	115,455,860	2,364,622,318[3]

[1] The capital stock of the Securities Trust, previously owned by the Government of Canada, was transferred to the Canadian National Railway Company in consideration for a like amount of capital stock of the National Company.

[2] The 4 p.c. preferred stock is represented by shares having a par value of one dollar each, in respect of which non-cumulative dividends shall, from time to time, be paid to the extent that earnings are available for distribution in any year. The amount issued under the adjustment authorized by the Capital Revision Act, and for which a like amount of Government of Canada loans have been cancelled, is equal to 50 p.c. of the borrowed capital at Dec. 31, 1951.

[3] Excludes shares of subsidiary companies owned by public amounting to $4,518,890 for 1951 and $4,516,490 for 1952.

12.—Capital Structure of the Canadian National Railway System, as at Dec. 31, 1944-53

NOTE.—Information given in greater detail in DBS report, *Canadian National Railways, 1923-53.*

At Dec. 31—	Shareholders' Capital		Funded Debt Held by Public		Government Loans and Appropriations—Active Assets in Public Accounts	Totals
	Government of Canada Shareholders' Account	Capital Stock Held by Public	Guaranteed by Federal and Provincial Governments	Unguaranteed		
	$	$	$	$	$	$
1944	754,695,486	4,669,840	579,287,482	50,166,424	661,875,853	2,050,695,085
1945	777,326,528	4,643,040	528,275,246	44,904,751	690,973,594	2,046,123,159
1946	776,018,575	4,635,440	488,772,318	41,650,680	718,537,286	2,029,614,299
1947	774,195,901	4,570,940	538,759,177	44,100,584	689,470,349	2,051,096,951
1948	774,242,649	4,567,540	492,437,507	91,795,151	760,494,825	2,123,537,672
1949	774,448,716	4,560,290	539,706,744	85,159,176	743,661,162	2,147,536,088
1950	776,395,649	4,520,890	566,418,607	92,611,634	739,847,514	2,179,794,294
1951	776,395,649	4,518,890	518,396,607	96,800,428	857,573,774	2,253,685,348
1952	1,531,072,324	4,516,490	518,396,607	87,098,222	228,055,165	2,369,138,808
1953	1,552,050,067	4,514,490	513,977,391	75,834,299	342,140,048	2,488,516,295

Assets.—In Table 13, the assets of the Canadian National Railway System as at Dec. 31, 1953, are compared with those at the time of consolidation of the System.

13.—Assets of the Canadian National Railway System, as at Dec. 31, 1922 and 1953

Account	Dec. 31, 1922	Dec. 31, 1953	Increase or Decrease
	$	$	$
Investments—			
Road and equipment	1,765,323,644	2,488,946,890	+723,623,246
Improvements on leased railway property	1,492,123	1,216,308	−275,815
Sinking funds	4,629,855	—	−4,629,855
Deposits in lieu of mortgaged property sold	6,171,808	4,719,831	−1,451,977
Miscellaneous physical property	34,767,914	71,584,067	+36,816,153
Affiliated companies	24,253,323	54,785,126	+30,531,803
Other investments	5,789,464	692,454	−5,097,010
Totals, Investments	**1,842,428,131**	**2,621,944,676**	**+779,516,545**
Current Assets—			
Cash	14,651,422	18,196,743[1]	+3,545,321
Special deposits	6,139,435	4,522,972	−1,616,463
Loans and bills receivable	11,600	—	−11,600
Traffic and car service, balances receivable	2,528,622	—	−2,528,622
Net balances receivable from agents and conductors	5,386,673	24,685,898	+19,299,225
Miscellaneous accounts receivable	16,857,420	21,029,259	+4,171,839
Materials and supplies	41,408,999	108,898,665	+ 67,489,666
Interest and dividends receivable	377,003	53,722	−323,281
Rents receivable	112,269	—	−112,269
Other current assets	106,775	7,793,940	+7,687,165
Totals, Current Assets	**87,580,218**	**185,181,199**	**+97,600,981[2]**
Deferred Assets—			
Working fund advances	166,847	538,321	+371,474
Insurance and other funds	352,488	14,058,145	+13,705,657
Pension contract fund	—	85,870,000	+85,870,000
Other deferred assets	11,805,962	1,795,763	−10,010,199
Totals, Deferred Assets	**12,325,297**	**102,262,229**	**+89,936,932**
Unadjusted Debits—			
Rents and insurance premiums paid in advance	322,059	903,096	+581,037
Discount on capital stock	634,960	—	−634,960
Discount on funded debt	1,919,635	2,557,650	+638,015
Other unadjusted debits	12,820,903	5,131,415	−7,689,488
Totals, Unadjusted Debits	**15,697,557**	**8,592,161**	**−7,105,396**
Grand Totals	**1,958,031,203**	**2,917,980,265**	**+959,949,062**

[1] Includes demand loans and deposits.

[2] Increase in current liabilities $9,674,616.

Operating Finances.—Gross revenue, operating expenditure and net revenue include only those from steam railway and commercial telegraph operations, but the deficits are for the entire System, including the operating results of the Niagara, St. Catharines and Toronto Railway (electric) and other railways operated separately, hotels, commercial telegraphs, coastal steamships and all other outside operations.

14.—Gross Revenue, Operating Expenditure, Net Revenue, Fixed Charges and Deficits of the Canadian National Railway System,[1] 1944-53

NOTE.—Figures for 1911-25 are given in the 1936 Year Book, p. 660; for 1926-39 in the 1942 Year Book, p. 590; and for 1940-43 in the 1951 edition, p. 731. Figures for Newfoundland are included from Apr. 1, 1949.

Year	Gross Operating Revenue	Operating Expenditure	Income Available for Fixed Charges	Total Fixed Charges	Net Income Deficit[2]	Cash Deficit
	$	$	$	$	$	$
1944........	441,147,510	362,547,044	73,473,733	50,474,480	Cr. 22,999,253	Cr. 23,026,924
1945........	433,773,394	355,294,048	73,521,185	49,009,507	Cr. 24,511,678	Cr. 24,756,130
1946........	400,586,026	357,236,718	37,239,784	46,685,316	9,445,532	8,961,570[3]
1947........	438,197,980	397,122,607	29,330,757	45,925,891	16,595,134	15,885,194[3]
1948........	491,269,950	464,739,970	12,502,931	46,341,727	33,838,796	33,532,741[3]
1949........	500,723,386	478,501,660	6,152,649	48,631,896	42,479,247	42,043,027[3]
1950........	553,831,581	493,997,079	44,084,904	47,421,983	3,337,079	3,261,235
1951........	624,834,120	580,150,221	31,722,489	48,176,558	16,454,069	15,031,996
1952........	675,219,415	634,852,915	25,702,660	25,415,189	Cr. 287,471	Cr. 142,327
1953........	696,622,451	659,049,086	29,238,623	29,376,160	137,537	Cr. 244,017

[1] Includes the Central Vermont Railway, Inc. [2] Includes appropriations for insurance fund.
[3] Contributed by the Federal Government.

Milage and Traffic.—At Dec. 31, 1953, main-track milage (exclusive of electric lines) of the Canadian National Railways (including lines in the United States and Newfoundland but exclusive of the Northern Alberta Railways and Toronto Terminals Railway lines, controlled jointly by the Canadian National and the Canadian Pacific Railways) was 24,368 miles. Including the Thousand Islands Railways, 4·51 miles, controlled but operated separately, the total milage was 24,372·5. The grand total, including 72·9 miles of electric lines, was 24,445·4 miles.

15.—Train Traffic Statistics of the Canadian National Railways (Canadian and United States Lines), 1952 and 1953

(Exclusive of electric lines)

Milage and Traffic	1952	1953
Train Milage—		
Passenger trains..miles	25,533,678	24,949,141
Freight trains.. "	49,541,512	46,883,109
Totals, Train Miles.............................. **No.**	**75,075,190**	**71,832,250**
Passenger-Train Car Milage—		
Coaches and combination.................................miles	71,032,668[1]	67,478,330[1]
Motor unit cars.. "	969,111	1,021,566
Parlour, sleeping and dining cars......................... "	65,281,036	64,340,084
Baggage, mail, express, etc............................... "	98,324,513	99,560,767
Totals, Passenger-Train Car Miles............. **No.**	**235,607,328**	**232,400,747**

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[1] Excludes work service.

15.—Train Traffic Statistics of the Canadian National Railways (Canadian and United States Lines), 1952 and 1953—concluded

Milage and Traffic		1952	1953
Freight-Train Car Milage—			
Loaded freight-car	miles	1,348,655,134	1,308,501,856
Empty freight-car	"	636,815,274	632,418,375
Caboose	"	48,778,742	46,399,773
Totals, Freight-Train Car Miles	**No.**	**2,034,249,150**	**1,987,320,004**
Passenger Traffic—			
Passengers carried (earning revenue)	No.	18,832,815	18,080,958
Passengers carried (earning revenue) one mile	"	1,635,201,983	1,538,832,219
Passenger-train miles per mile of road	"	1,056	1,033
Average passenger journey	miles	86·83	85·11
Average amount received per passenger	$	2·57349	2·53948
Average amount received per passenger mile	$	0·02964	0·02984
Average passengers per train mile	No.	64·04	61·68
Average passengers per car mile	"	12·75	12·40
Total passenger-train earnings per train mile	$	3·86	3·98
Total passenger-train revenue per mile of road	$	4,076·82	4,113·98
Freight Traffic—			
Revenue freight carried	tons	90,053,919	86,523,327
Revenue freight carried one mile	"	38,430,494,637	36,677,980,252
Revenue freight carried one mile per mile of road	"	1,584,763	1,513,672
Total (all classes) freight carried one mile per mile of road	"	1,708,033	1,626,843
Average tons revenue freight per train mile	No.	776	782
Average tons (all classes) freight per loaded car mile	"	30·64	30·03
Average hauls revenue freight	miles	426·75	423·91
Freight revenue per train mile	$	10·83	11·81
Freight revenue per mile of road	$	22,187·81	22,921·32
Freight revenue per ton	$	5·96	6·40
Freight revenue per ton mile	$	0·01397	0·01501

Section 2.—Electric Railways*

Replacing the horse-car systems, used in Montreal and Toronto as early as 1861, electric street railways were first seen in operation in Canada in 1885, when a successful experimental railway was constructed and operated at the Toronto Exhibition Grounds. The first electric railway line in Canada, and probably the first in North America, ran between Windsor and Walkerville, Ont. and was established early in June 1886 (it is recorded that it was in active operation before June 11).

Cheap and reasonably rapid passenger conveyance is a necessity of modern urban life. In some cities of Eastern Canada, electric railways are still operated by private companies under city franchises, but in a number of cities in Ontario and Western Canada the electric railways are owned and operated by the municipalities. The number of electric railways in operation declines each year as motor- and trolley-buses replace electric trams. Of the 22 systems in service in 1952, six operated electric cars, motor-buses and trolley-buses; nine operated trolley-buses and motor-buses; three operated electric cars only; one, electric cars and motor-buses; and one, trolley-buses only. Equipment of electric railways is shown in Table **16**.

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* Statistics presented in this Section cover the urban and inter-urban operations of the electric railway systems. More detailed information is given in DBS publication, *Electric Railways of Canada, 1952.*

16.—Equipment of Electric Railways, 1950-52

Equipment	1950	1951	1952	Equipment	1950	1951	1952
	No.	No.	No.		No.	No.	No.
Passenger Vehicles—				**Other Vehicles—**			
Closed cars	2,594	2,399	2,307	Baggage, express and mail cars	16	12	11
Open cars	6	4	4	Freight cars	88	86	82
Combination passenger and baggage cars	5	5	5	Locomotives	57	54	55
Cars without electrical equipment	130	123	108	Snow ploughs	53	51	47
Motor-buses	1,927	1,979	2,090	Sweepers	81	74	65
Trackless trolley-buses	909	1,035	1,067	Trucks	137	139	153
				Miscellaneous	176	158	177
Totals, Passenger Vehicles	**5,571**	**5,545**	**5,581**	**Totals, Other Vehicles**	**608**	**574**	**590**

Finances.—The financial statistics of electric railways given in Table 17 have been greatly affected by variations in traffic and by changes in mode of local transportation. When electric railways have ceased operation because of decline in traffic or have substituted other types of rolling-stock, their figures have been dropped from the tabulation. Despite changing conditions, however, the gross revenue of electric railways increased each year from a low point reached in 1933; very marked increases were shown from 1940 to 1945. The ratio of expenses to receipts rose from a low of 68 p.c. in 1943 to 97 p.c. in 1952. Many systems have changed over from private to public ownership in the past few years which accounts for much of the recorded decline in the value of stocks and the increase in funded debt.

17.—Financial Statistics of Electric Railways, 1943-52

NOTE.—Figures for 1901–42 are given in the corresponding table of previous Year Books beginning with the 1926 edition.

Year	Capital Liability			Investment in Road and Equipment	Gross Earnings	Operating Expenses	Ratio of Expenses to Receipts	Employees	Salaries and Wages
	Stocks	Funded Debt	Total						
	$	$	$	$	$	$	p.c.	No.	$
1943	37,492,392	147,433,845	184,926,237	204,586,208	80,027,414	54,548,335	68·16	17,896	33,975,281
1944	37,540,432	142,364,766	179,905,198	202,666,204	84,730,173	58,202,151	68·69	19,034	36,845,152
1945	37,329,194	142,384,083	179,713,277	205,026,475	88,939,451	64,533,940	72·56	20,091	39,364,771
1946	35,656,763	132,042,089	167,698,852	203,537,797	87,515,721	75,550,821	86·33	21,700	45,675,363
1947	33,915,932	138,246,540	172,162,472	218,439,361	86,519,712	81,787,723	94·53	22,627	50,117,441
1948	28,138,481	140,692,280	168,830,761	217,385,299	89,310,215	88,024,727	98·56	22,593	55,268,083
1949	27,425,491	143,944,716	171,370,207	242,095,483	95,596,394	92,378,848	96·63	21,661	59,155,605
1950	27,252,391	159,192,587	186,444,978	223,224,556	91,034,058	89,414,380	98·22	21,869	57,645,574
1951	20,252,391	179,159,159	199,411,550	255,057,250	99,114,548	97,880,959	98·76	21,052	64,188,551
1952	5,535,795[1]	147,980,382[1]	53,516,177	260,037,852	104,028,691	101,110,712	97·20	20,268	67,252,025

[1] Decrease from 1951 accounted for by the re-capitalization of the Winnipeg Electric Company; transit facilities of that Company were transferred to the Greater Winnipeg Transit Company.

Traffic.—In 1952, electric cars travelled 73,165,934 miles in passenger service, trackless trolley-buses operated by electric-railway companies travelled 34,117,476 miles and motor-buses 59,148,827 miles. Although most of the urban centres in which transit services operate have greatly extended their populated areas in the post-war years, electric cars and buses travelled fewer passenger miles each year since 1948 and the number of fare passengers carried declined each year since 1946.

18.—Traffic Statistics of Electric-Railways, 1943-52

NOTE.—Figures for 1901-42 are given in the corresponding table of previous Year Books beginning with the 1933 edition.

Year	Miles of Road		Electric Car and Bus Milage			Fare Passengers Carried[1]	Freight Carried[1]
	Total	With Double Track	Passenger	Other	Total		
	miles	miles	miles	miles	miles	No.	tons
1943	1,019·29	487·91	164,050,357	2,773,462	166,823,819	1,177,003,883	3,751,785
1944	1,019·69	490·17	169,421,343	2,756,755	172,178,098	1,249,707,399	3,769,959
1945	1,015·54	488·30	175,498,520	2,777,976	178,276,496	1,316,571,540	3,639,989
1946	1,004·44	485·06	177,256,084	2,822,300	180,078,384	1,344,916,773	3,506,805
1947	895·25	436·95	180,204,812	2,808,252	183,013,064	1,323,723,782	3,655,278
1948	778·92	391·78	182,943,709	3,038,989	185,982,698	1,309,565,795	4,050,111
1949	719·31	356·61	173,849,096	3,048,146	176,897,242	1,240,558,812	3,702,016
1950	662·96	326·90	173,285,475	3,562,144	176,847,619	1,192,058,052	4,115,974
1951	595·38	293·87	167,316,921	3,646,069	170,962,990	1,133,393,935	4,479,404
1952	567·79	272·02	166,432,237	3,759,193	170,191,430	1,109,299,866	4,079,474

[1] Includes passengers and freight carried on buses and trackless trolley-buses operated by electric railways.

19.—Passengers, Employees and Others Killed or Injured on Electric Railways, 1943-52

NOTE.—Figures for 1900-42 are given in the corresponding table of previous Year Books beginning with the 1926 edition.

Year	Passengers		Employees		Others		Totals	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
	No.	No.	No.	No.	No.	No.	No.	No.
1943	—	4,301	2	722	78	1,491	80	6,514
1944	3	3,980	7	835	88	1,556	98	6,371
1945	2	4,092	3	944	104	1,592	109	6,628
1946	8	4,009	3	904	66	1,584	77	6,497
1947	2	4,181	4	910	71	1,469	77	6,560
1948	2	3,792	5	1,336	74	1,328	81	6,456
1949	1	3,688	1	766	63	1,239	65	5,693
1950	—	3,718	1	730	44	1,204	45	5,652
1951	—	3,392	2	650	42	998	44	5,040
1952	2	3,551	1	655	40	1,046	43	5,252

The Toronto Underground Electric Railway.—Construction of Canada's first underground electric railway or subway commenced at Toronto in 1949 and the line was put into operation in March 1954. The route of the subway follows the general line of Yonge Street, a distance of about 4·5 miles from Front Street to Eglinton Avenue. Twelve stations are located along the line and a pedestrian tunnel links the Union Station and the Royal York Hotel with the subway. Sub-surface sections of the subway are from six to 20 feet underground. Rapid-transit cars, 104 in number, each of 62-passenger capacity, are used. The 500-foot platforms at all stations accommodate trains of up to eight cars in length which handle a peak load of 40,000 passengers an hour in each direction.

Section 3.—Express Companies

Express service is an expedited freight service on passenger trains, but express companies do not own the means of performing these services; railway facilities are used by virtue of contracts with the railway companies. Express companies in Canada have always operated in close co-operation with the railways.

Goods are sent by express for quick transit, so that express rates do not generally compete with freight rates. The Dominion Express Company, in pursuance of its contract with the Canadian Pacific Railway, gave, in its first tariff, a rate of two and one-half times the maximum first-class railway freight rate for the same goods carried the same distance. The majority of the contracts between express and railway companies for carrying express freight are on the basis of a percentage of the gross express revenue and the rates paid by the shipper are subject to the approval of the Board of Transport Commissioners. All express companies are organized under powers conferred by Federal Government legislation and their business consists in the expeditious shipment of valuable live stock and such perishable commodities as fresh fish, fruit, etc., the forwarding of parcels, and the issue of money orders, travellers cheques, letters of credit and other forms of financial paper.

Express Company Operations.—Four express organizations operate in Canada — three Canadian and one American. The Canadian Pacific Express Company, formerly the Dominion Express Company, is a subsidiary of the Canadian Pacific Railway and handles the express business on the railways and the inland and ocean steamship lines of the parent company. The express business of the Canadian National and Northern Alberta Railways is handled by departments of the respective railways. The Railway Express Agency, Incorporated, operates over the Canadian sections of United States railways and over the route from Skagway, Alaska, to points in Yukon Territory. No statistics are available on the volume of traffic carried by express because much of the traffic consists of parcels and small lots that would make statistical classification and measurement very difficult.

20.—Milages operated by, and Revenue and Expenditure of, Express Companies, 1944-53

NOTE.—Figures for 1911–43 are given in the corresponding table of previous Year Books beginning with the 1927–28 edition.

Year or Company	Milages Operated[1]	Gross Earnings	Operating Expenditure	Express Privileges[2]	Net Operating Revenue
	No.	$	$	$	$
1944	50,668	34,357,760	18,856,659	15,301,512	199,589
1945	50,938	37,171,862	20,040,339	16,711,647	419,876
1946	51,365	39,260,553	22,670,616	16,841,229	Dr. 251,292
1947	51,341	42,314,758	25,770,190	17,650,061	Dr. 1,105,493
1948	51,840	46,809,112	30,398,053	18,785,988	Dr. 2,374,929
1949	54,806	51,966,290	32,385,223	21,226,817	Dr. 1,645,750
1950	55,581	52,017,492	32,881,689	21,355,956	Dr. 2,220,153
1951	57,355	60,423,503	38,374,128	21,037,164	1,012,211
1952	57,335	70,185,114	44,744,018	24,428,739	1,012,357
1953					
Canadian National Express	30,077	38,692,427	26,620,299	11,414,666	657,462
Canadian Pacific Express	21,544	33,307,083	21,836,070	11,056,090	414,923
Northern Alberta Railways	928	680,844	315,617	307,638	57,589
Railway Express Agency, Inc.	3,256	1,616,594	797,856	806,412	12,326
Totals, 1953	**55,805**	**74,296,948**	**49,569,842**	**23,584,806**	**1,142,300**

[1] Over railways, boat lines and motor-carrier and aircraft routes.

[2] Amounts paid by express companies to the carriers, i.e., railways, steamship lines, etc., for transporting express matter.

21.—Business Transacted by Express Companies in Financial Paper, 1949-53

Item	1949	1950	1951	1952	1953
	$	$	$	$	$
Money orders, domestic and foreign......	131,358,491	121,476,102	137,215,925	134,870,537	134,996,758
Travellers cheques, domestic and foreign.	8,250,196	9,242,789	7,753,328	7,332,881	7,589,928
C.O.D. cheques..........................	23,527,669	21,292,175	24,186,587	23,826,544	22,144,909
Telegraphic transfers....................	187,522	153,140	191,188	255,243	274,705
Totals.........................	**163,323,878**	**152,164,206**	**169,347,028**	**166,285,205**	**165,006,300**

22.—Employees, Salaries, Wages and Commissions of Express Companies, 1944-53

Year	Full-Time Employees	Salaries and Wages[1]	Commissions Paid	Year	Full-Time Employees	Salaries and Wages[1]	Commissions Paid
	No.	$	$		No.	$	$
1944.........	6,705	13,263,739	1,729,195	1949.........	8,809	23,621,322	2,283,425
1945.........	7,160	13,945,167	1,846,884	1950.........	8,974	24,195,490	2,177,933
1946.........	7,430	16,060,439	1,975,856	1951.........	9,610	28,607,463	2,443,341
1947.........	8,017	18,308,793	1,995,947	1952.........	10,849	32,503,058	2,689,830
1948.........	8,525	22,212,249	2,157,489	1953.........	12,119	37,413,060	2,795,766

[1] Includes wages paid to part-time employees.

PART III.—ROAD TRANSPORTATION[*]

In this Part of the Chapter, highways and motor-vehicles are treated as related features of transportation. Following an introductory section, which summarizes provincial regulations regarding motor-vehicles and motor traffic, the entire subject of road transportation is dealt with under the headings of roads and highways and motor-vehicles.

Section 1.—Provincial Motor-Vehicle and Traffic Regulations[†]

NOTE.—It is obviously impossible to include here the great mass of detailed regulations in force in each province and territory; only the more important general information is given. The sources of information for detailed regulations for specific provinces and territories are given at pp. 857-858.

General.—The registration of motor-vehicles and of motor-vehicle traffic lies within the legislative jurisdiction of the provincial and territorial governments. Regulations that are common to all provinces and territories are summarized under the following headings:—

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[*] Except as otherwise indicated, the material in this Part has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

[†] The information in this Section has been revised from material provided by the officials in charge of the administration of motor-vehicle and traffic Acts and Regulations in the individual provinces and territories.

Operator's Licences.—The operator of a motor-vehicle must be over a specified age (usually 16 years) and must carry a licence, obtainable in most provinces only after prescribed qualification tests and is renewable annually. Special licences are required for chauffeurs and, in some jurisdictions, for those granted licences who have not reached the specified age.

Motor-Vehicle Regulations.—In general, all motor-vehicles and trailers must be registered annually, with the payment of specified fees, and must carry two (one only in Saskatchewan and Alberta) registration plates, one on the front and one on the back of the vehicle (one only for the back in the case of trailers). A change of ownership of the vehicle must be recorded with the registration authority. However, exception from registration is granted for a specified period (usually at least 90 days) in any year to visitors' private vehicles registered in another Province or a State that grants reciprocal treatment. Further regulations require a safe standard of efficiency in the mechanism of the vehicle and of its brakes, and stipulate that equipment include non-glare headlights, a proper rear light, a satisfactory locking device, a muffler, a windshield wiper, and a rear-vision mirror.

Traffic Regulations. — In all provinces and territories, vehicles keep to the right-hand side of the road. Everywhere motorists are required to observe traffic signs, lights, etc., placed at strategic points on highways and roads. Speed limits, usually of 50 miles per hour (60 in Alberta), are in effect; slower speeds are always required in cities, towns and villages, in passing schools and public playgrounds, at road intersections, railway crossings, or at other places or times where the view of the highway for a safe distance ahead is in any way obscured. Motor-vehicles must not pass a tram that has stopped to take on or discharge passengers, except where safety zones are provided. Accidents resulting in personal injury or property damage must be reported to a provincial or municipal police officer and a driver involved must not leave the scene of an accident until he has rendered all possible aid and disclosed his name to the injured party.

Penalties.—Penalties ascend in scale from small fines for minor infractions of any of the regulations to suspension of the operator's driving permit, impounding of the car, or imprisonment for serious infractions, recklessness, driving without an operator's licence, and especially for attempting to operate a motor-vehicle while intoxicated.

Safety Responsibility Legislation.—Each province of Canada has enacted legislation under this heading (sometimes referred to as Financial Responsibility Legislation). In general, the legislation provides for the automatic suspension of the driver's licence and motor-vehicle permit of a person convicted of an offence arising out of a motor-vehicle accident. The suspension remains effective until proof of financial responsibility is filed. The object of this law is to encourage safe driving by imposing more severe penalties for carelessness. The latest amendments to the safety legislation of the various provinces is given in the 1954 Year Book, pp. 805-808.

Although Safety Responsibility Legislation has not been enacted in either the Yukon Territory or the Northwest Territories, the Motor Vehicle Ordinances of the two Territories require the owner of a motor-vehicle to submit evidence of stipulated insurance coverage on such vehicle before he can obtain registration.

Unsatisfied Judgment Funds.—In recent years a new type of motor-vehicle legislation has been enacted in all provinces except Quebec and Saskatchewan. This has usually taken the form of an amendment to the motor-vehicle laws of the province and provides for the establishment of an Unsatisfied Judgment Fund, out of which are paid judgments awarded for damages arising out of motor-vehicle accidents in the province which cannot be collected in the ordinary process of law. The Fund is created by the collection annually of an Unsatisfied Judgment Fund fee from the registered owner of every motor-vehicle or from every person to whom a driver's licence is issued. This fee does not exceed $1 per annum. A feature of this legislation which is contained in some provincial statutes provides for the payment of judgments in the so-called 'hit and run' accidents. When these occur, if neither the owner nor the driver can be identified, action may be taken against the Registrar of Motor Vehicles; any judgment secured against the Registrar is paid out of the Fund. All of these laws contain a provision limiting the amount that can be paid out of the Fund on one judgment. The limits are $5,000 for one person, $10,000 for two or more persons injured in one accident and $1,000 for property damage. For 'hit and run' accidents payments are made for personal injuries or death only.

Sources of information for provincial motor-vehicle and traffic regulations:—

Newfoundland

Administration.—Deputy Minister of Public Works, St. John's.

Legislation.—The Highway Traffic Act, 1941, as amended.

Prince Edward Island

Administration.—The Provincial Secretary, Charlottetown.

Legislation.—The Highway Traffic Act (R.S.P.E.I. 1951, c. 73).

Nova Scotia

Administration.—Motor Vehicle Branch, Department of Highways and Public Works, Halifax.

Legislation.—The Motor Vehicle Act (1932, c. 6) as amended, and the Motor Carrier Act (R.S.N.S. 1923, c. 78) as amended.

New Brunswick

Administration.—Motor Vehicle Division, Provincial Tax Branch, Department of Provincial Secretary-Treasurer, Fredericton.

Legislation.—The Motor Vehicle Act (R.S.N.B. 1951, c. 73) as amended.

Quebec

Administration.—Motor Vehicle Bureau, Provincial Revenue Offices, Finance Department, Quebec.

Legislation.—The Motor Vehicle Act (R.S.Q. 1941, c. 142) as amended.

Ontario

Administration.—Motor Vehicles Branch, Department of Highways, Toronto.

Legislation.—The Highway Traffic Act (R.S.O. 1937, c. 288) as amended, the Public Vehicle Act, 1949, and the Public Commercial Vehicle Act, 1949.

Manitoba

Administration.—Provincial Treasurer, Winnipeg.

Legislation.—The Highway Traffic Act (R.S.M. 1940, c. 93) as amended.

Saskatchewan

Administration.—Treasury Department, Highway Traffic Board, Revenue Building, Regina.

Legislation.—The Vehicles Act (R.S.S. 1951, c. 85).

Alberta

Administration.—Motor Vehicle Branch, Department of the Provincial Secretary, Edmonton, and the Highway Traffic Board, Department of Highways, Edmonton.

Legislation.—The Vehicles and Highway Traffic Act (R.S.A. 1942, c. 275) as amended, the Motor Vehicles Accident Indemnity Act (1947, c. 11) as amended, the Public Service Vehicles Act (R.S.A. 1942, c. 276), and Rules and Regulations. The Vehicles and Highway Traffic Act and Motor Vehicle Accident Indemnity Act are administered by the Motor Vehicle Branch, Department of the Provincial Secretary, and the Public Service Vehicles Act by the Highway Traffic Board, Department of Highways.

British Columbia

Administration and Legislation.—Enforcement of the Motor Vehicle Act, the Highway Act and the Motor Carrier Act is vested in the Royal Canadian Mounted Police and the various municipal police forces, while the Highway Act is administered by the Minister of Public Works, the Motor Carrier Act by the Public Utilities Commission, and the Motor Vehicle Act by the Superintendent of Motor Vehicles, Vancouver, B.C.

Yukon Territory

Administration.—Commissioner of the Yukon Territory, Whitehorse, Y.T. Information regarding regulations may also be obtained from the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa, Ont.

Legislation.—The Motor Vehicle Ordinance (1952, First Session, c. 8) as amended.

Northwest Territories

Administration.—Commissioner of the Northwest Territories. Address communications to the Director, Northern Administration and Lands Branch. Department of Northern Affairs and National Resources, Ottawa, Ont.

Legislation.—The Motor Vehicles Ordinance (1950, c. 16) as amended.

Section 2.—Roads and Highways

The figures of Table 1 include the milages of all roads under provincial jurisdiction, those in the National Parks, local roads in the Atlantic Provinces, Ontario and British Columbia and estimates of local roads in the three Prairie Provinces.

There are great stretches of country in Newfoundland, the northern portions of Quebec, Ontario, the Prairie Provinces and British Columbia with very few people and very few roads, but the more densely populated portions are well supplied. The Northwest Highway System (the Alaska Highway), built for military purposes during 1942 and extending 1,600 miles from Fort St. John, B.C., to Fairbanks, Alaska, serves civilian as well as military traffic. It opens up a vast area of hitherto virgin territory and affords a means of all-weather land communication from Alaska through Canada to the United States. Completed in 1949, the Mackenzie Highway which runs 386 miles from Grimshaw, Alta., to Hay River, N.W.T., has been of great value in the development of the Great Slave Lake region and the entire Mackenzie River Valley.

Statistics of urban streets have been collected since 1935 from cities and principal towns; the small municipalities omitted would increase the totals very little. For 1952, the total number of miles of street reported was 15,189, composed of 4,219 miles of bituminous pavements, 869 miles of portland cement concrete, 3,014 miles of bituminous surfaces, 3,996 miles of gravel and crushed stone and 70 miles of other surfaces; making a total of 12,168 miles of surfaced streets and 3,022 miles of earth roads. These figures for urban streets or roads are not included in Table 1.

1.—Milage of each Type of Road, by Province, as at Mar. 31, 1953

NOTE.—The figures for Canada are the sums of the milages so reported. Urban streets are not included in the figures.

Classification	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Canada
	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles	miles
SURFACED ROAD												
Portland cement concrete	—	4	7	—	296	1,442	97	—	—	33	—	1,879
Bituminous pavements	30	—	25	—	6,441	4,786	—	—	—	1,704	—	12,986
Bituminous surface	97	335	1,363	1,900	844	4,654	978	987	1,700	924	2	13,784
Gravel—Crushed stone	2,300	2,079	6,997	11,244	21,351	51,902	8,624	15,643	21,359	9,495	1,616	152,610
Other surfaces	—	—	—	—	—	—	—	47	—	—	—	47
TOTALS, SURFACED ROAD	2,427	2,418	8,392	13,144	28,932	62,784	9,699	16,677	23,059	12,156	1,618	181,306
NON-SURFACED ROAD												
Improved earth	—	1,298	3,033	—	—	11,386	7,832	83,349	29,758[1]	9,758	383	146,797
Other earth roads	3,940	—	3,749	—	13,092	—	74,172	55,680[1]	32,327[2]	1,641	91	184,692
TOTALS, NON-SURFACED ROAD	3,940	1,298	6,782	—	13,092	11,386	82,004	139,029	62,085	11,399	474	331,489
Grand Totals	**6,367**	**3,716**	**15,174**	**13,144**	**42,024**	**74,170**	**91,703**	**155,706**[1]	**85,144**	**23,555**	**2,092**	**512,795**

[1] Excludes surveyed road allowances not in use. [2] Includes all road allowances.

Expenditure on Roads and Highways.—The roads and highways of Canada, except those in the Yukon and Northwest Territories, the Indian reserves and the National Parks, are under the jurisdiction of the respective provincial or municipal authorities. Expenditure was sharply curtailed during the war years 1939-45 and a considerable backlog of essential repair, improvement and expansion work accumulated. In 1946, approximately $144,469,000 was expended on construction, general maintenance and repair of roads and bridges and in subsequent years outlays increased steadily, the amount expended in the year ended Mar. 31, 1953, being $404,291,421. In considering this increase, it must be remembered that the unit cost per mile of construction has also advanced tremendously.

2.—Construction, Maintenance and General Expenditure on Rural Roads, Bridges and Ferries, by Province, Years Ended Mar. 31, 1950-53

Item and Province or Territory	1950	1951	1952	1953
	$	$	$	$
Construction—				
Newfoundland	1,862,129	4,485,354	4,555,303	2,954,526
Prince Edward Island	1,177,213	1,564,687	2,130,750	2,221,375
Nova Scotia	14,606,701[1]	16,620,796[2]	9,267,598	5,744,539
New Brunswick	9,848,276[3]	11,667,309[4]	6,039,885	6,376,795
Quebec	37,977,756	31,325,159	56,995,225	73,769,845
Ontario	34,200,336	41,220,136	55,768,891	69,779,100
Manitoba	7,998,782	5,361,168	9,347,887	11,627,268
Saskatchewan	6,247,962	6,677,887	9,065,930	13,325,620
Alberta	12,845,686	16,509,201	21,301,524	34,211,782
British Columbia	26,571,557	18,599,050	16,298,760	23,170,263
Yukon and N.W.T	2,391,972	2,521,066	595,600	508,149
Totals, Construction[5]	**156,223,856**	**157,202,628**	**192,810,362**	**244,614,842**
Maintenance—				
Newfoundland	1,442,908	1,447,686	1,646,977	1,893,130
Prince Edward Island	888,485	1,063,116	1,001,335	1,077,210
Nova Scotia	7,288,235[1]	7,640,691[2]	6,880,574	8,202,264
New Brunswick	5,278,069[3]	8,268,063[4]	7,083,580	8,618,951
Quebec	19,337,970	20,761,173	25,735,365	30,628,015
Ontario	38,987,794	44,719,097	49,547,029	58,105,684
Manitoba	1,844,171	2,143,407	2,097,872	2,251,555
Saskatchewan	2,630,792	3,268,886	3,857,513	4,503,343
Alberta	11,730,362	13,387,434	14,390,843	15,184,161
British Columbia	13,628,207	10,170,411	12,498,943	15,192,109
Yukon and N.W.T	1,023,368	1,273,154	3,050,323	2,062,618
Totals, Maintenance	**104,080,361**	**114,143,118**	**127,790,354**	**147,719,040**
Administration and General—				
Newfoundland	179,700	218,409	233,871	230,943
Prince Edward Island	87,969	53,315	68,988	69,432
Nova Scotia	651,425[1]	980,022[2]	692,893	968,344
New Brunswick	249,202[3]	390,087[4]	242,682	276,312
Quebec	2,010,406	2,076,995	2,436,853	2,602,009
Ontario	4,728,877	4,343,658	4,583,869	4,636,933
Manitoba	588,150	621,086	685,479	738,036
Saskatchewan	234,857	238,544	282,334	384,262
Alberta[6]	61,193	114,693	89,287	86,649
British Columbia	921,693	3,695,307	4,353,599	1,654,696
Yukon and N.W.T	152,253	190,423	31,039	11,693
Totals, Administration and General	**9,865,725**	**13,097,937[7]**	**13,983,546[7]**	**11,957,539[7]**
Grand Totals	**270,169,942**	**284,443,683**	**334,584,262**	**404,291,421**
Distribution of All Expenditure—				
Federal	**10,312,894**	**17,169,721**	**21,667,085**	**25,034,650**
Provincial	**240,747,574**	**249,554,236**	**287,934,225**	**350,248,566**
Municipal	**18,594,702**	**17,191,662**	**23,288,598**	**27,721,288**
Other	**514,772**	**528,064**	**1,694,354**	**1,286,917**

[1] Year ended Nov. 30, 1949. [2] Sixteen-month period ended Mar. 31, 1951. [3] Year ended Oct. 31, 1949. [4] Seventeen-month period ended Mar. 31, 1951. [5] Includes payments from railways and contributions from the Railway Grade Crossing Fund toward elimination of grade crossings, etc., amounting to $495,486 in 1950, $529,505 in 1951, $1,443,009 in 1952, and $925,580 in 1953. The Federal Government also contributed $121,310 toward grade separations, etc., on the Trans-Canada Highway during 1951. [6] Federal administrative costs only. [7] Includes federal administrative costs *re* Trans-Canada Highway amounting to $175,398 in 1951, $282,652 in 1952 and $298,230 in 1953.

The Trans-Canada Highway System.—An outline of the Agreement on, and specifications and construction of, the federal-provincial Trans-Canada Highway and a map showing the proposed route in the provinces participating is given in the 1951 Year Book, pp. 631-634. The road will be a hard-surfaced two-lane highway 22 to 24 ft. in width with ample shoulder widths, bridge clearances and sight distances, low gradients and curvature, and a load-bearing capacity of nine tons for one axle. Railway grade-crossings will be eliminated wherever possible.

The 1954 estimated milage for the eight provinces originally entering into this Agreement with the Federal Government in 1950, and for Nova Scotia which entered in 1952, gave the Highway a length of 4,580 miles, divided as follows: Newfoundland, 610 miles; Prince Edward Island, 74; Nova Scotia, 310; New Brunswick, 388; Ontario, 1,412; Manitoba, 305; Saskatchewan, 414; Alberta, 292; British Columbia, 692; and the National Parks, 83.

Contractual commitments for the nine participating provinces with respect to new construction on the Highway during the period Dec. 9, 1949, to Mar. 31, 1954, amounted to $142,530,857 of which the Federal Government's share was 50 p.c., or $71,265,428. Federal payments to the provinces during this period for prior, interim and new construction totalled $47,328,069. On-site labour expended on the Highway up to Mar. 31, 1954, amounted to 2,721,580 eight-hour man-days of employment; off-site employment required for the provision of necessary materials and services is estimated at 4,627,000 man-days.

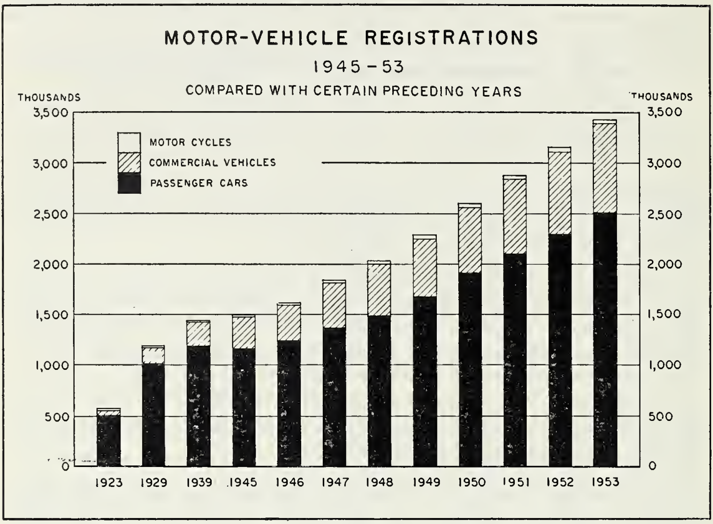
The Highway through the National Parks is being constructed with Federal Government funds and the amount of $2,000,000 was allotted by Parliament for that purpose for the year ended Mar. 31, 1955.

By June 1954, contracts for 1,483 miles of grading had been approved and the equivalent of 1,250 miles built, contracts for base-course and paving had been approved for 978 miles and the equivalent of 806 miles has been completed, and 83 bridges, over-passes and other structures having over 20-foot spans, had been completed.

Section 3.—Motor-Vehicles

Registration.—Automobiles were registered in Canada for the first time in 1904. Ontario was the only province to issue licences in that year. New Brunswick began registering cars in 1905; Quebec, Saskatchewan and Alberta in 1906; British Columbia in 1907; Manitoba in 1908; Nova Scotia in 1909; Prince Edward Island in 1913; and Yukon Territory in 1914.

In 1905, only 565 motor-vehicles were registered in Canada but by 1915 the number had risen to 95,284 and by the end of the next decade to 724,048. With the exception of 1931-33, an annual increase was in evidence until 1941 when 1,572,784 motor-vehicles were registered. The number of commercial vehicles continued to increase during the war years but a considerable decline was shown in passenger cars owing to restrictions on manufacture and the rationing of tires and gasoline. However, post-war recovery was rapid, reaching a peak in 1953 when the total of 3,430,672 registrations included 2,513,754 passenger cars and taxis, 867,773 trucks and miscellaneous vehicles, 8,968 buses and 40,177 motorcycles.



3.—Motor-Vehicles Registered, by Province, 1944-53

Note.—Registrations given here include passenger cars, trucks, buses, motorcycles, service cars, etc. but not trailers or dealer licences. Figures for 1904-35 are given in the 1937 Year Book, p. 668, and those for 1936-43 in the 1948-49 edition, p. 707.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total[1]
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1944.....	...	8,412	57,933	39,570	224,042	675,057	93,297	140,992	127,416	135,090	1,502,567
1945.....	...	8,835	56,699	41,577	228,681	662,719	92,758	140,257	130,153	134,788	1,497,081
1946.....	...	9,192	62,660	44,654	255,172	711,106	101,090	148,206	138,868	150,234	1,622,463
1947.....	...	9,948	70,300	51,589	296,547	800,058	112,149	158,512	155,386	179,684	1,835,959
1948.....	...	11,290	76,319	62,366	335,953	874,933	128,000	167,515	173,950	202,126	2,034,943
1949.....	13,981	13,211	83,443	67,280	384,733	970,137	139,836	185,027	200,428	230,008	2,290,628
1950.....	16,375	15,383	94,743	74,415	433,701	1,104,080	157,788	199,866	230,624	270,312	2,600,511
1951.....	20,058	16,896	105,262	83,023	500,729	1,205,098	171,265	215,450	259,841	291,417	2,872,420
1952.....	23,630	18,717	114,982	89,839	574,974	1,291,753	187,881	237,014	291,469	321,482	3,155,997
1953.....	29,576	20,286	129,564	93,914	617,855	1,406,119	203,652	257,504	318,812	348,830	3,430,672

[1] Totals include 4,560 registrations in the Yukon and Northwest Territories.

4.—Types of Motor-Vehicles Registered, by Province, 1952 and 1953

Year and Province or Territory	Passenger Cars[1]	Commercial Cars, Trucks, etc.[2]	Buses	Motor-cycles	Total
	No.	No.	No.	No.	No.
1952					
Newfoundland	15,936	7,021	333	340	23,630
Prince Edward Island	11,667	6,930	20	100	18,717
Nova Scotia	74,831	38,639	[3]	1,512	114,982
New Brunswick	58,991	29,099	436	1,313	89,839
Quebec	402,864	152,970	3,124	16,016	574,974
Ontario	1,024,816	249,460	4,070[4]	13,407	1,291,753
Manitoba	131,992	53,700	189	2,000	187,881
Saskatchewan	147,824	87,996	123	1,071	237,014
Alberta	189,287	99,326	487	2,369	291,469
British Columbia	236,711	80,842	[3]	3,929	321,482
Yukon and N.W.T.	1,560	2,662	19	15	4,256
Canada, 1952	**2,296,479**	**808,645**	**8,801**	**42,072**	**3,155,997**
1953					
Newfoundland	20,509	8,569	200	298	29,576
Prince Edward Island	12,218	7,932	15	121	20,286
Nova Scotia	88,985	39,231	[3]	1,348	129,564
New Brunswick	63,041	29,249	431	1,193	93,914
Quebec	440,720	158,595	3,464	15,076	617,855
Ontario	1,117,175	271,581	4,049[4]	13,314	1,406,119
Manitoba	145,052	56,648	190	1,762	203,652
Saskatchewan	157,942	98,517	120	925	257,504
Alberta	207,402	108,625	479	2,306	318,812
British Columbia	258,940	86,065	[3]	3,825	348,830
Yukon and N.W.T.	1,770	2,761	20	9	4,560
Canada, 1953	**2,513,754**	**867,773**	**8,968**	**40,177**	**3,430,672**

[1] Includes taxis. [2] Includes service cars, tractors, etc. [3] Included with trucks. [4] Includes trolley-buses.

Apparent Consumption of Automobiles.—The apparent consumption of automobiles in Canada in any year is computed by deducting the number exported from the sum of the production and imports. Statistics regarding retail sales and the financing of motor-vehicle sales in Canada are given under Domestic Trade, Chapter XXI.

5.—Apparent Supply of New Automobiles, 1944-53

Year	Cars Made for Sale in Canada[1]		Car Imports		Re-exports of Imported Cars		Apparent Supply	
	Passenger	Commercial[2]	Passenger	Commercial	Passenger	Commercial	Passenger	Commercial
	No.	No.	No.	No.	No.	No.	No.	No.
1944	—	66,013	35	3,249	5	33	30	69,229
1945	1,866	47,459	236	1,855	3	19	2,099	49,295
1946	63,501	41,318	18,642	3,600	6	72	82,137	44,846
1947	128,243	63,152	35,570	7,293	26	4	163,787	70,441
1948	135,316	73,582	17,037	3,575	17	4	152,336	77,153
1949	177,060	85,715	35,293	3,404	32	8	212,321	89,111
1950	259,481	96,826	81,722	6,806	62	20	341,141	103,612
1951	243,155	105,547	42,631	5,703	2,866	11	282,920	111,239
1952	245,443	112,485	35,665	4,328	999	11	280,109	116,802
1953	319,937	100,772	53,179	5,296	44	3	373,072	106,065

[1] Factory shipments since 1952. [2] Includes Armed Forces vehicles.

Provincial Government Revenue from Motor-Vehicles.—The taxation of motor-vehicles, garages, drivers, chauffeurs, etc., is an important source of provincial government income. In every province, licences or permits duly issued by the provincial authorities are required for motor-vehicles of all kinds, trailers, operators or drivers, paid chauffeurs, dealers, garages and gasoline and service stations. In 1953 the average cost per motor-vehicle for operating taxes and licences was almost $90. Lower gasoline tax rates in the five provinces from Ontario westward brought the averages for those provinces below the national average. Present gasoline tax rates range from one cent per gallon in the Northwest Territories to 15 cents in Newfoundland, Nova Scotia and New Brunswick.

The more important sources from which provincial revenue from motor-vehicles is derived are shown in Table 6. Federal Government revenue from import duties, excise and sales taxes are given in Chapter XXIV.

6.—Provincial Revenue from the Registration and Operation of Motor-Vehicles, Years Ended Mar. 31, 1953

Province or Territory	Registration Licences				Operator and Chauffeur Licences	Tax on Bus and Truck Operators	Gasoline Tax	Total, including Miscellaneous Revenue
	Passenger Car	Truck and Bus	Motorcycle	Dealer				
	$	$	$	$	$	$	$	$
Newfoundland	346,890	447,947	2,676	2,339	117,169	[1]	2,137,582	3,155,870
P. E. Island	207,840	197,928	466	2,910	27,998	4,344	1,202,210	1,662,690
Nova Scotia	1,607,634	1,577,908[2]	[3]	16,169	285,066	90,954	9,555,028	13,469,199
New Brunswick	1,254,531	1,499,697	6,846	625	228,357	[3]	7,337,787	10,544,529
Quebec	10,207,505	9,198,076	40,844	78,140	1,874,525	805,225	56,589,501	79,685,772
Ontario	10,466,609	10,131,990	25,099	49,509	1,944,934	1,708,047	86,238,934	113,086,374
Manitoba	2,120,636	1,169,469[4]	6,783	19,076	542,991	443,112	8,279,262	12,859,319
Saskatchewan	2,127,775	1,149,765[5]	4,840	49,926	343,541	663,049	14,087,699	19,555,506
Alberta	2,757,415	2,922,487	6,964	..	494,319	2,171,974	17,315,100	26,175,556
British Columbia	5,879,235	3,077,349	21,279	29,833	312,059[6]	396,610	16,936,040	27,182,734
Yukon and N.W.T.	22,667	22,927	22	175	14,379	22,898	196,952	286,615
Canada	**36,998,737**	**31,395,543**	**115,819**	**248,702**	**6,185,338**	**6,306,213**	**219,876,095**	**307,664,164**

[1] Included with passenger car and truck. [2] Bus included with miscellaneous. [3] Included with miscellaneous. [4] Bus included with passenger car. [5] Bus included with tax on bus and truck operators. [6] Includes only new five-year licences issued during 1952-53.

Sales of Gasoline.—'Gasoline', under the provincial Acts, includes all petroleum oils used as fuel in internal combustion engines, as well as propane gas which is being used to an increasing extent in motor-buses.

7.—Sales of Gasoline, by Province, 1949-53

Province	1949	1950	1951	1952	1953
	gal.	gal.	gal.	gal.	gal.
Newfoundland	[1]	[1]	[1]	13,820,200	16,504,200
Prince Edward Island	8,240,105	9,085,340	10,245,817	10,832,264	12,388,599
Nova Scotia	57,443,469	61,348,662	65,776,919	69,174,476	75,772,354
New Brunswick	56,685,862	58,814,989	63,615,057	67,361,022	77,108,360
Quebec	304,139,386	340,621,374	372,853,122	430,671,283	456,460,906
Ontario	623,684,828	687,729,936	766,491,887	844,162,648	928,515,728
Manitoba	104,023,413	112,495,837	127,658,248	148,274,072	159,554,101
Saskatchewan	168,266,743	176,118,129	192,585,333	238,663,980	250,698,689
Alberta	218,935,855	241,387,708	272,991,830	329,255,018	361,665,017
British Columbia	142,297,406	155,423,743	173,070,142	191,444,793	210,028,255
Totals, Gross Sales	**1,683,717,067**	**1,843,025,718**	**2,045,288,355**	**2,343,659,756**	**2,548,696,209**
Refunds and exemptions	436,022,855	461,777,271	527,198,497	625,547,937	646,181,392
Totals, Net Sales	**1,254,882,212**[1]	**1,390,090,447**[1]	**1,528,905,858**[1]	**1,718,111,819**	**1,902,514,817**

[1] Estimated net sales for Newfoundland, amounting to 7,188,000 gal. in 1949, 8,842,000 gal. in 1950, and 10,816,000 gal. in 1951, are included in net totals; gross sales for those years are not available.

Motor-Carriers.*—The lack of statistical information regarding commercial traffic on the highways led to the institution, in 1941, of a census of motor-carriers. The carriers are divided into two classes: passenger and freight. Each of these is subdivided into (*a*) carriers with annual revenue of $20,000 or over; (*b*) carriers with revenue of $8,000 to $20,000; and (*c*) carriers with revenue under $8,000. Bus companies handling urban traffic exclusively are compiled as a class. Many street-railway systems operate motor-buses but the statistics of such systems are not included here; they are included in electric-railway statistics. Licensed carriers doing highway construction work, building air-fields, etc., are excluded from the compilations. Taxi operators and urban delivery trucks are also excluded, except where their operations include inter-urban business. Carriers operating as both passenger and freight carriers are classed as passenger or freight according to the preponderance of the revenue. The passenger revenue of trucking companies and the freight revenue of bus companies are small percentages of their respective total revenue.

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* Statistics are given in more detail in DBS annual report, *Motor Carriers, Freight-Passenger.*

8.—Capital, Revenue, Employees and Equipment of Motor-Carriers, 1950 and 1951

Item	Freight Carriers with—						Passenger Carriers	Total, All Carriers
	Annual Revenue of $20,000 or over		Annual Revenue of $8,000–$20,000		Annual Revenue of under $8,000			
	1950	1951	1950	1951	1950	1951	1951	1951
Carriers.......No.	718	810	682	768	2,125	2,276	421	4,275
Investments—								
Land, buildings, equipment, etc. $	53,745,770	65,373,201	5,954,954	6,592,158	7,187,142	7,662,498	80,597,461	160,225,318
Revenue—								
Freight....... $	90,150,972	106,987,481	8,375,810	9,389,787	7,944,623	8,670,691	249,281	125,297,240
Passenger—								
Intercity and rural........ $	325,453	238,546	20,436	12,938	—	—	50,118,544	50,370,028
City..........$	—	—	—	—	—	—	18,234,122	18,234,122
Miscellaneous.. $	4,409,974	3,308,718	257,736	332,817	306,242	217,759	2,855,920	6,715,214
Totals, Revenue $	94,886,399	110,534,745	8,653,982	9,735,542	8,250,865	8,888,450	71,457,867	200,616,604
Working proprietors...No.	490	672	746	888	2,158	2,246	235	4,041
Employees—								
As at July 15..No.	15,618	16,875	1,215	1,162	491	380	10,330	28,747
As at Dec. 15. "	15,715	16,622	1,110	1,129	363	351	9,666	27,768
Total wages... $	35,899,329	41,529,631	1,817,013	1,975,686	738,658	809,598	26,224,455	70,539,370
Equipment—								
Trucks.......No.	6,767	6,816	1,617	1,716	2,560	2,651	185	11,368
Tractor, semi-trailer units. "	3,501	3,933	92	95	31	40	13	4,081
Trailers...... "	2,359	3,162	75	68	45	39	12	3,281
Buses........ "	73	68	20	12	7	6	4,788	4,874

Table **9** shows the freight and passengers carried by motor-carriers in 1950 and 1951. Traffic data were not available for the majority of the small operators. Many truck operators failed to report tons of freight carried and others reported only estimates so that these data are not complete. A difficulty in compiling weights is that much traffic is carried on a load or package basis and not on a weight basis. Records of passengers appear to be fairly complete, possibly because tickets are sold and accounted for, and the unit is not so complex as for freight carried.

9.—Traffic Carried by Motor-Carriers, 1950 and 1951

Year and Item	Freight Carriers with—			Passenger Carriers	Total, All Carriers
	Annual Revenue of $20,000 or over	Annual Revenue of $8,000-$20,000	Annual Revenue of under $8,000		
1950					
Passengers—					
Regular Routes—					
Intercity and rural..............No.	270,692	21,978	—	128,911,770	129,204,440
City............................ "	—	—	—	228,541,212	228,541,212
Special and Chartered Service—					
Intercity and rural..............No.	9,228	186	—	5,272,678	5,282,092
City............................ "	—	—	—	314,201	314,201
Totals, Passengers................No.	**279,920**	**22,164**	—	**363,039,861**	**363,341,945**
Totals, Freight, Intercity and Rural[1]..........................ton	**15,849,326**	**1,599,265**	**1,501,585**	**59,312**	**19,009,488**
1951					
Passengers—					
Regular Routes—					
Intercity and rural..............No.	490,781	13,090	—	126,996,603	127,500,474
City............................ "	—	—	—	232,387,675	232,387,675
Special and Chartered Service—					
Intercity and rural..............No.	3,928	642	—	5,705,737	5,710,307
City............................ "	—	—	—	348,282	348,282
Totals, Passengers................No.	**494,709**	**13,732**	—	**365,438,297**	**365,946,738**
Totals, Freight, Intercity and Rural[1]..........................ton	**15,371,413**	**1,395,833**	**1,448,539**	**32,971**	**18,248,756**

[1] Tonnage data are not reported by all carriers and totals are, therefore, incomplete.

Motor-Vehicle Accidents.—Motorists are required by law to report accidents but complete statistics of these accidents are not available for all provinces. The Dominion Bureau of Statistics compiles statistics on all deaths from motor-vehicle accidents and these are shown in Table **10**. A direct comparison of such statistics between the provinces is of little value owing to differences in size, population, motor-vehicle density, etc., but, to put them on somewhat the same basis, the average number of deaths per 10,000 registered motor-vehicles has also been tabulated. These data still give no weight to differences in use of motor-vehicles, variations in climate, road conditions, tourist cars, etc., all of which are factors in accidents but it is apparent that more safety education is required in all provinces.

Data presented in Table **11** relate to traffic accidents only and consequently may not be compared with Table **10** which includes details of fatalities occurring elsewhere than on public streets or roads.

10.—Deaths Resulting from Motor-Vehicle Traffic and Non-traffic Accidents, by Province, 1943-52

NOTE.—This table was compiled in the Health and Welfare Division, Dominion Bureau of Statistics. Figures for 1926-35 will be found in the 1941 Year Book, p. 578, and those for 1936-42 in the 1948-49 edition, p. 712.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	DEATHS BY PLACE OF OCCURRENCE										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943.....	...	5	90	70	392	563	44	34	84	155	1,437
1944.....	...	11	73	56	406	526	53	43	80	124	1,372
1945.....	...	8	76	90	424	637	67	58	71	125	1,556
1946.....	...	4	84	69	482	729	94	70	91	158	1,781
1947.....	...	15	83	104	476	753	77	51	103	207	1,869
1948.....	...	5	96	118	599	782	81	87	125	193	2,086
1949.....	...	11	102	96	645	873	105	85	172	176	2,265
1950.....	18	7	94	103	682	850	75	91	162	188	2,270
1951.....	26	20	103	122	818	991	102	93	184	227	2,686
1952.....	25	26	115	139	931	1,067	112	131	188	223	2,957
	DEATHS PER 10,000 REGISTERED MOTOR-VEHICLES										
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1943.....	...	6·23	15·20	17·41	17·60	8·14	4·71	2·54	6·59	11·51	9·51
1944.....	...	13·08	12·60	14·15	18·12	7·79	5·68	3·05	6·28	9·18	9·14
1945.....	...	9·05	13·40	21·65	18·41	9·61	7·22	4·14	5·46	9·27	10·39
1946.....	...	4·35	13·40	15·45	18·89	10·25	9·30	4·72	6·55	10·52	10·98
1947.....	...	15·08	11·81	20·16	16·05	9·41	6·87	3·22	6·63	11·52	10·17
1948.....	...	4·43	12·58	18·92	17·83	8·94	6·33	5·19	7·19	9·55	10·25
1949.....	...	8·33	12·22	14·27	16·76	9·00	7·51	4·59	8·58	7·65	9·89
1950.....	10·99	4·55	9·92	13·84	15·73	7·70	4·75	4·55	7·02	6·95	8·74
1951.....	12·96	11·84	9·78	14·69	16·34	8·22	5·96	4·32	7·08	7·79	9·36
1952.....	10·58	13·89	10·00	15·47	16·19	8·26	5·96	5·53	6·45	6·94	9·37

11.—Motor-Vehicle Traffic Accidents, by Province, 1952

Item	N'f'ld.[1]	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon-N.W.T.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Accidents Reported												
Fatal— Resulting in death of one or more persons	2	26	107	103	789	893	85	83	131	177	4	2,400
Non-fatal— Resulting in injury to one or more persons............	196	133	1,619	865	10,604	16,300	2,043	2,380	2,694	4,864	58	41,756
Resulting in property damage only[2]......	367	882	6,793	3,361	87,760	41,322	8,126	7,000	11,872	16,148	183	183,814
Totals, Accidents...	**565**	**1,041**	**8,519**	**4,329**	**99,153**	**58,515**	**10,254**	**9,463**	**14,697**	**21,189**	**245**	**227,970**
Persons Killed												
Drivers............	—	7	28	33	..	286	25	46	56	61	3	...
Passengers...........	—	10	36	37	..	348	46	38	45	78	—	...
Pedestrians..........	2	10	52	45	..	316	32	19	28	53	1	...
Bicyclists...........	—	1	3	2	..	29	3	—	6	7	—	...
Motorcyclists and passengers.........	—	—	—	—	..	26	1	2	2	7	—	...
Others..............	—	—	1	—	..	5	—	1	2	3	—	...
Totals, Persons Killed............	**2**	**28**	**120**	**117**	859	**1,010**	**107**	**106**	**139**	**209**	4	**2,701**

For footnotes, *see* end of table, p 868.

11.—Motor-Vehicle Traffic Accidents, by Province, 1952—concluded

Item	N'f'ld.[1]	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon-N.W.T.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Persons Injured												
Drivers	6	48	621	347	..	6,719	886	1,244	1,309	1,969	33	...
Passengers	37	91	905	536	..	10,486	1,277	1,762	1,910	3,595	55	...
Pedestrians	152	34	681	273	..	4,619	461	275	455	1,147	2	...
Bicyclists	18	13	88	72	..	1,028	167	82	80	294	—	...
Motorcyclists and passengers	3	—	2	—	..	706	69	65	65	171	—	...
Others	6	3	18	—	..	76	7	23	20	21	—	...
Totals, Persons Injured	**222**	**189**	**2,315**	**1,228**	**12,706**	**23,634**	**2,867**	**3,451**	**3,839**	**7,197**	**90**	**57,738**
Amount of Property Damage Caused[2]..... $'000	**93**	**261**	**1,766**	**1,381**	..	**19,458**	..	**3,561**	**4,976**	**6,449**	**134**	...

[1] City of St. John's only. [2] Accidents causing damage estimated at $50 or over are reported by all authorities except the following: Saskatchewan reports $100 or over; Alberta reports $75 or over; Quebec and Yukon Territory report $25 or over; Charlottetown, P.E.I., reports all accidents.

PART IV.—WATERWAYS*

The Canada Shipping Act.—Legislation regarding all phases of shipping is consolidated under the Canada Shipping Act (R.S.C. 1952, c. 29). Under the Act and its amendments the Parliament of Canada accepts full responsibility for the regulation of Canadian shipping.

Section 1.—Shipping Facilities and Traffic

The developments and equipment to facilitate water traffic are classified under the headings of shipping, harbours, canals and aids to navigation. Subsection 5 gives information regarding pilotage service, steamship inspection, and personnel shipped and discharged.

Subsection 1.—Shipping

All waterways including canals and inland lakes and rivers are open on equal terms, except in the case of the coasting trade, to the shipping of all countries of the world so that the commerce of Canada is not dependent entirely upon Canadian shipping. However, a large part of the inland and coastal traffic is carried in ships of Canadian registry.

Canadian Registry.—Under Part I of the Canada Shipping Act all ships in excess of 10 tons register tonnage are required to be registered; ships of lower tonnage may be registered voluntarily, otherwise they are required to be operated under a Vessel Licence, if powered by a motor of 10 h.p. or more. Sect. 6 of the Act restricts ownership to British subjects or bodies corporate established under and subject to the laws of some part of Her Majesty's Dominions and having their principal place of business in those Dominions. Under the British Commonwealth Merchant Shipping Agreement all Commonwealth ships are given the general designation

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* Information and statistics dealing with this subject have been supplied as follows: aids to navigation, canals, harbours, administrative services, and marine services, by the Department of Transport and the National Harbours Board; part of the financial statistics, by the Department of Public Works; shipping subsidies, by the Director of Subsidized Steamship Services, Canadian Maritime Commission; Panama Canal, by the Governor of the Panama Canal Zone; other canal traffic and statistics of shipping, by the Public Finance and Transportation Division, Dominion Bureau of Statistics.

'British Ship'; and a ship that should be but is not registered is not entitled to the privileges accorded to British ships. Ships in the planning stage or in course of construction may be recorded before registry by a Registrar of Shipping.

1.—Vessels on the Canadian Shipping Registry, by Province, as at Dec. 31, 1951-53

NOTE.—Figures for 1935–50 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Province or Territory	1951		1952		1953	
	No.	Net Tons	No.	Net Tons	No.	Net Tons
Newfoundland	1,791	82,716	1,636	77,066	1,405	68,965
Prince Edward Island	144	7,835	164	7,881	201	8,090
Nova Scotia	4,214	120,365	4,389	139,098	4,570	138,295
New Brunswick	963	35,554	1,012	38,939	1,067	41,664
Quebec	1,696	579,417	1,815	554,044	1,931	528,456
Ontario	1,774	432,810	1,858	503,447	1,944	505,609
Manitoba	107	12,233	105	12,142	103	11,985
Saskatchewan	1	147	1	147	1	147
Alberta	2	385	2	385	3	418
British Columbia	4,583	384,122	4,816	394,148	4,933	387,056
Yukon Territory	17	3,767	17	3,767	17	3,767
Northwest Territories	—	—	—	—	6	263
Totals	**15,292**	**1,659,351**	**15,815**	**1,731,064**	**16,181**	**1,694,715**

Shipping Traffic.—A brief description of the early development of Canadian shipping is given in the 1941 Year Book, pp. 597-598. Complete statistics, comparable with those given for the railways, showing all the freight carried by water, are not available. However, there is a record of the number and tonnage of ships calling at all ports at which there are customs collectors and of cargoes of vessels trading between Canadian and foreign ports. Each vessel visiting a customs port or outport makes a statistical return which is forwarded to the Dominion Bureau of Statistics. Coastwise cargo has been reported from Jan. 1, 1952.

Reports are not made for vessels of less than 10 registered net tons and the tonnage of tugs is the gross ton and not the net ton used for cargo vessels. Fishing vessels are not required by customs regulations to report when operating from certain ports; consequently, the data are not on the same basis as data for cargo vessels.

2.—Vessels Entered at Canadian Ports,[1] 1944-53

NOTE.—Figures for the years ended Mar. 31, 1929–35, are given in the 1941 Year Book, p. 597, and for 1936–43 in the 1948–49 edition, p. 733.

Year	In Foreign Service[2]		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
1944	23,786	28,356,681	64,999	43,776,497	88,785	72,133,178
1945	24,431	29,655,984	65,410	48,098,201	89,841	77,754,185
1946	26,461	30,367,071	67,014	45,559,014	93,475	75,926,085
1947	27,868	35,926,095	73,439	51,823,502	101,307	87,749,597
1948	31,138	39,443,055	75,141	52,453,382	106,279	91,896,437
1949	30,565	40,088,377	82,012	56,037,003	112,577	96,125,380
1950	31,420	42,816,949	84,065	56,066,997	115,485	98,883,946
1951	32,304	47,508,342	86,571	60,802,798	118,875	108,311,140
1952	33,782	52,156,098	79,722	56,776,504	113,504	108,932,602
1953	34,400	56,589,078	88,675	67,417,391	123,075	124,006,469

[1] Exclusive of passenger services. [2] Sea-going and inland international.

3.—Vessels Entered at each of the Principal Canadian Ports, 1953

NOTE.—For details of shipping at all ports in Canada, *see* DBS publication, *Shipping Report.*

Province and Port	In Foreign Service[1]		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
Newfoundland—						
Bell Island	167	694,165	138	376,872	305	1,071,037
Botwood	53	156,874	40	74,203	93	231,077
Cornerbrook	106	257,619	559	545,139	665	802,758
Port aux Basques	6	2,793	831	397,005	837	399,798
St. John's	836	879,054	1,197	475,640	2,033	1,354,694
Totals, Newfoundland[2]	**1,974**	**2,472,807**	**6,555**	**2,741,009**	**8,529**	**5,213,816**
Prince Edward Island—						
Charlottetown	46	43,110	286	109,153	332	152,263
Totals, Prince Edward Island[2]	**62**	**65,256**	**396**	**137,793**	**458**	**203,049**
Nova Scotia—						
Digby	107	24,925	460	647,742	567	672,667
Halifax	1,157	4,438,453	976	946,502	2,133	5,384,955
North Sydney	192	48,817	1,977	635,637	2,169	684,454
Sydney	102	188,445	888	1,376,320	990	1,564,765
Yarmouth	335	172,233	345	25,650	680	197,883
Totals, Nova Scotia[2]	**3,688**	**6,140,468**	**7,354**	**4,082,990**	**11,042**	**10,223,458**
New Brunswick—						
Campobello	656	11,793	36	540	692	12,333
Saint John	537	1,757,136	918	947,047	1,455	2,704,183
Totals, New Brunswick[2]	**5,826**	**2,088,318**	**3,533**	**1,385,641**	**9,359**	**3,473,959**
Quebec—						
Baie Comeau	28	58,020	728	284,468	756	342,488
Montreal	2,149	5,262,216	3,890	4,467,182	6,039	9,729,398
Port Alfred	460	1,552,750	753	737,674	1,213	2,290,424
Quebec	585	2,405,699	2,285	2,454,074	2,870	4,859,773
Three Rivers	231	590,998	2,477	1,197,484	2,708	1,788,482
Totals, Quebec[2]	**3,774**	**10,336,376**	**13,416**	**10,594,437**	**17,190**	**20,930,813**
Ontario—						
Amherstburg	64	130,252	76	39,999	140	170,251
Cobourg	19	23,923	89	83,273	108	107,196
Cornwall	105	117,316	309	344,057	414	461,373
Fort William	462	1,129,237	818	2,454,305	1,280	3,583,542
Hamilton	808	2,800,868	623	623,744	1,431	3,424,612
Kingston	381	93,413	922	1,139,693	1,303	1,233,106
Midland	63	135,153	196	670,659	259	805,812
Port Arthur	542	1,405,793	1,210	3,854,012	1,752	5,259,805
Port Colborne	160	370,258	1,052	2,112,532	1,212	2,482,790
Port McNicoll	2	9,276	197	609,200	199	618,476
Prescott	238	353,831	261	510,091	499	863,922
St. Catharines	39	90,098	106	119,308	145	209,406
Sarnia	648	2,399,003	826	1,539,049	1,474	3,938,052
Sault Ste. Marie	519	1,703,807	392	565,768	911	2,269,575
Thorold	129	205,831	384	570,154	513	775,985
Toronto	914	1,743,633	1,143	1,329,745	2,057	3,073,378
Windsor	326	866,298	375	505,399	701	1,371,697
Totals, Ontario[2]	**7,388**	**16,056,890**	**11,844**	**19,678,800**	**19,232**	**35,735,690**

For footnotes, *see* end of table.

3.—Vessels Entered at each of the Principal Canadian Ports, 1953—concluded

Province and Port	In Foreign Service[1]		In Coasting Service		Totals	
	Vessels	Net Tons Registered	Vessels	Net Tons Registered	Vessels	Net Tons Registered
	No.	No.	No.	No.	No.	No.
Manitoba (Churchill)	**30**	**118,631**	**1**	**4,239**	**31**	**122,870**
British Columbia—						
Nanaimo	570	546,547	3,452	5,583,428	4,022	6,129,975
New Westminster	702	1,406,381	2,654	1,252,876	3,356	2,659,257
Ocean Falls	46	204,080	787	670,720	833	874,800
Port Alberni	111	440,629	616	297,438	727	738,067
Powell River	209	289,960	3,280	958,280	3,489	1,248,240
Prince Rupert	1,336	489,479	1,840	816,710	3,176	1,306,189
Union Bay	9	3,440	501	95,656	510	99,096
Vancouver	3,409	7,534,012	24,125	14,061,881	27,534	21,595,893
Victoria	3,799	6,971,117	4,454	3,423,752	8,253	10,394,869
Totals, British Columbia[2]	**11,654**	**19,308,051**	**45,542**	**28,776,244**	**57,196**	**48,084,295**
Yukon and Northwest Territories	**4**	**2,281**	**34**	**16,238**	**38**	**18,519**
Grand Totals	**34,400**	**56,589,078**	**88,675**	**67,417,391**	**123,075**	**124,006,469**

[1] Sea-going and inland international. [2] Includes small ports not shown separately.

4.—Cargoes at Canadian Ports Loaded or Unloaded from Vessels in Foreign Service, by Province, 1951-53

Province and Year	Loaded	Unloaded	Province, Territory and Year	Loaded	Unloaded
	tons	tons		tons	tons
Newfoundland—			Ontario—		
1951	1,883,325	402,427	1951	5,550,453	23,383,058
1952	2,069,750	698,138	1952	6,113,558	23,881,456
1953	2,742,764	671,606	1953	6,320,032	23,808,278
Prince Edward Island—			Manitoba—		
1951	44,864	28,652	1951	203,621	6,993
1952	76,248	18,246	1952	283,157	14,997
1953	55,173	27,741	1953	322,551	2,784
Nova Scotia—			British Columbia—		
1951	4,018,764	1,841,121	1951	6,542,254	3,028,605
1952	3,987,639	2,373,939	1952	8,507,443	3,236,052
1953	4,138,305	2,115,749	1953	8,871,878	3,140,263
New Brunswick—			Yukon and N.W.T.—		
1951	1,745,548	656,935	1951	269	41
1952	2,274,696	619,443	1952	258	8
1953	1,643,060	636,729	1953	—	3
Quebec—			**Totals—**		
1951	7,290,701	8,921,562	**1951**	**27,279,799**	**38,269,394**
1952	9,241,694	7,913,927	**1952**	**32,554,443**	**38,756,206**
1953	8,108,442	8,288,724	**1953**	**32,202,205**	**38,691,877**

Subsection 2.—Harbours

Water transportation cannot be studied with any degree of completeness without taking into consideration the co-ordination of land and water transportation at many of the ports. Facilities provided to enable interchange movements include the necessary docks and wharves, some for passenger traffic but most of them for freight, warehouses for the handling of general cargo, and special equipment for such bulk freight as lumber, coal, oil, grain, etc. Facilities may include cold-storage warehouses, harbour railway and switching connections, grain elevators, coal bunkers, oil-storage tanks and, in the chief harbours, dry-dock accommodation.

Eight of the principal harbours of Canada are administered by the National Harbours Board. Seven other harbours come under the supervision of the Department of Transport and are administered by commissions that include municipal as well as Federal Government appointees. In addition, there are about 300 public harbours that are under the direct supervision of the Department of Transport. These harbours are administered under rules and regulations approved by the Governor General in Council. Harbour masters have been appointed by the Minister of Transport for 131 of these harbours, their remuneration being made from fees levied on vessels under the terms of the Canada Shipping Act.

At most ports, in addition to the harbour facilities operated by the National Harbours Board or other operating commission, there are dock and handling facilities owned by private companies such as railway, pulp and paper, oil, sugar industries, etc. At a number of ports there are also dry docks but these are dealt with separately at p. 875.

5.—Facilities of the Six Principal Harbours, as at Dec. 31, 1953

NOTE.—The facilities at these ports include those under the control of other agencies as well as those of the National Harbours Board.

Item	Halifax	Saint John	Quebec	Three Rivers	Montreal	Vancouver
Minimum depth of approach channel ft.	50	30	35	35	35	40
Harbour railway.................. miles	31	63	23	5	62	75
Piers, wharves, jetties, etc........ No.	46	20	36	3	112	28
Length of berthing................ ft.	33,416	12,915	33,650	8,690	53,060	31,440
Transit-shed floor space...........sq. ft.	1,429,507	835,700	766,000	265,250	2,225,000	1,450,600
Cold-storage warehouse capacity..cu. ft.	1,655,350	820,000	528,000	—	2,909,200	3,031,417
Grain Elevators—						
Capacity........................ bu.	4,116,000	3,000,000	4,000,000	2,000,000	15,162,000	18,716,500
Loading rate...............bu. per hr.	75,000	105,000	90,000	32,000	445,000	312,000
Floating crane capacity........... tons	80	65	75	—	75	85
Coal-dock storage capacity........ tons	82,000	—	215,000	300,000	1,380,000	—
Oil-tank storage capacity......... gal.	119,245,000	22,526,610	83,700,000	1,410,000	68,000,000	204,949,498

National Harbours Board.—The National Harbours Board, a Crown corporation established in 1936, is charged with the administration and operation of the following properties: port facilities such as wharves and piers, transit sheds, grain elevators, cold-storage warehouses, terminal railways, etc., at the harbours of Halifax, Saint John, Chicoutimi, Quebec, Three Rivers, Montreal, Vancouver, and Churchill; grain elevators at Prescott and Port Colborne; and the Jacques Cartier Bridge at Montreal. These facilities represent a capital investment of approximately $236,000,000. A description of the origin and functions of the Board is given in the 1940 Year Book, pp. 679-681, and current operating revenue and expenditure figures may be found in Table **29**, pp. 893-894 of this volume.

Harbour Traffic.—The freight movement through a large port takes a number of different forms. The overseas movement, i.e., the freight loaded on and unloaded from sea-going vessels, frequently constitutes a surprisingly small part of the total. Usually the volume coming in and going out by coasting vessels is larger. There is, as well, the in-transit movement in vessels that pass through the harbour without loading or unloading and the movement from one point to another within the harbour, which in many ports amounts to a large volume. It is not possible to obtain statistics of the total freight handled at all the ports and harbours of Canada because many of them are small and without the staff necessary to maintain detailed records. However, the National Harbours Board prepares an annual report of the water-borne cargo loaded and unloaded at the eight ports under its control. Six of these are the principal ports of Canada and the cargo handled at each is shown in Table 6. The figures include freight carried by coasting and inland international as well as by sea-going shipping; they include all cargo loaded and unloaded whether by facilities under the jurisdiction of the Board or at private docks and terminals. Cross-harbour movements, ballast (non-revenue), bunkers, ships' stores, mail and passengers' baggage are not included.

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at each of the Six Principal Ports, 1953 with Totals for 1952

Note.—Commodities totalling less than 50,000 tons are not listed.

Port and Commodity	1953			1952
	Inward	Outward	Total	Total
	tons	tons	tons	tons
Montreal—				
Grain	3,052,211	3,981,793	7,034,004	6,697,225
Petroleum oil, fuel	706,115	1,308,097	2,014,212	1,170,076
Petroleum oil, crude	869,231	373,309	1,242,540	1,096,559
Coal, bituminous	1,140,915	—	1,140,915	951,414
Gasoline	88,028	752,836	840,864	1,740,000
Flour, wheat	—	436,477	436,477	554,575
Cement, common or portland	222,469	115,259	337,728	317,433
Sugar, raw	317,107	—	317,107	311,104
Gypsum, crude	235,604	31,635	267,239	259,467
Coal, anthracite	244,650	21,996	266,646	257,364
Iron or steel, scrap	12,328	179,551	191,879	43,001
Iron ore	86,471	86,471	172,942	408,780
Petroleum oil, refined, *n.o.p.*	55,304	71,451	126,755	90,892
Iron or steel band, bars, *n.o.p.*, hoop, plates, rods, sheets, skelp, strip and tin plate	101,431	23,091	124,522	105,397
Chrome ore	67,519	53,331	120,850	76,709
Phosphate rock	108,627	—	108,627	75,235
Asbestos and asbestos manufactures	4,156	75,597	79,753	70,460
Wood-pulp	10,543	63,030	73,573	58,003
Lumber (planks, boards and flooring) and square timber	19,557	53,365	72,922	68,596
Motor-vehicles and parts	32,428	31,631	64,059	65,944
Machinery and parts (except agricultural)	37,855	19,777	57,632	60,518
Sulphur	56,634	—	56,634	21,156
Glass and glass manufactures	51,392	3,815	55,207	32,186
Iron or steel, structural	52,529	2,605	55,134	56,452
Iron or steel manufactures, *n.o.p.*	43,834	10,231	54,065	48,823
Manganese ore	26,078	26,039	52,117	11,216
Molasses	41,404	9,919	51,323	34,180
Totals, Commodities over 50,000 tons in 1953	**7,684,420**	**7,731,306**	**15,415,726**	**14,682,765**
Totals, All Commodities	**8,407,153**	**8,492,188**	**16,899,341**	**16,085,605**
Vancouver—				
Grain	1,400	2,997,558	2,998,958	3,457,423
Logs, masts, piling, pitprops, poles, posts, spars and ties (railway)	984,896	115,540	1,100,436	1,050,625
Petroleum oil, fuel	678,271	330,276	1,008,547	1,059,244
Petroleum oil, crude	898,582	19,366	917,948	1,165,433
Lumber (planks, boards and flooring) and square timber	453,072	460,144	913,216	832,557
Gasoline	348,516	206,341	554,857	473,251
Sand and gravel	514,658	16,786	531,434	419,344
Flour, wheat	214	303,831	304,045	287,368
Wood-pulp	207,554	12,497	220,051	238,056
Cement, common or portland	176,097	13,482	189,579	148,849
Rock and stone	3,832	158,158	161,990	197,133
Kerosene	102,238	49,810	152,048	111,805
Paper, newsprint	143,156	6,439	149,595	146,851

6.—Principal Commodities in Water-Borne Cargo Loaded and Unloaded at each of the Six Principal Ports, 1953 with Totals for 1952—concluded

Port and Commodity	1953			1952
	Inward	Outward	Total	Total
	tons	tons	tons	tons
Vancouver—concluded				
Hog fuel	—	128,405	128,405	75,759
Motor-vehicles and parts	99,423	8,327	107,750	77,004
Ores and concentrates, *n.o.p.*	97,413	7,065	104,478	105,290
Paper, *n.o.p.*	61,004	21,056	82,060	74,184
Sugar, raw	80,224	—	80,224	94,728
Coal, bituminous	45,058	32,269	77,327	92,977
Iron or steel tubes, pipe and fittings	69,861	3,220	73,081	61,534
Fish (including shell-fish), canned or preserved	22,294	29,291	51,585	41,537
Totals, Commodities over 50,000 tons in 1953	**4,987,763**	**4,919,861**	**9,907,614**	**10,210,952**
Totals, All Commodities	**5,987,453**	**5,849,080**	**11,836,533**	**12,099,542**
Halifax—				
Petroleum oil, crude	1,246,583	—	1,246,583	1,331,903
Petroleum oil, fuel	390,875	650,333	1,041,208	1,101,802
Gasoline	363,122	281,257	644,379	587,682
Grain	246	425,163	425,409	320,535
Flour, wheat	6	130,397	130,403	104,379
Coal, bituminous	117,561	—	117,561	162,100
Fish (including shell-fish), dried, pickled, salted or smoked	38,475	52,806	91,281	89,118
Lumber (planks, boards and flooring) and square timber	401	49,591	49,992	76,030
Totals, Commodities over 50,000 tons in 1953	**2,157,269**	**1,589,547**	**3,746,816**	**3,773,549**
Totals, All Commodities	**2,491,395**	**1,911,321**	**4,402,716**	**4,546,002**
Quebec—				
Grain	175,431	686,469	861,900	833,884
Pulpwood	632,091	1,065	633,156	504,873
Petroleum oil, fuel	571,673	4,005	575,678	450,994
Coal, bituminous	320,318	3,823	324,141	367,477
Gasoline	264,255	2,111	266,366	237,098
Asbestos and asbestos manufactures	134	107,658	107,792	104,686
Paper, newsprint	—	93,223	93,223	54,684
Cement, common or portland	83,874	2,002	85,876	68,473
Ores and concentrates, *n.o.p.*	720	59,194	59,914	60,188
Totals, Commodities over 50,000 tons in 1953	**2,048,496**	**959,550**	**3,008,046**	**2,682,357**
Totals, All Commodities	**2,199,104**	**1,057,444**	**3,256,548**	**3,020,172**
Three Rivers—				
Pulpwood	1,311,899	—	1,311,899	1,392,800
Grain	395,390	420,771	816,161	1,083,373
Coal, bituminous	371,505	—	371,505	370,925
Petroleum oil, fuel	166,870	19,488	186,358	163,111
Paper, newsprint	—	163,907	163,907	141,910
Gasoline	60,598	4,284	64,882	55,709
Totals, Commodities over 50,000 tons in 1953	**2,306,262**	**608,450**	**2,914,712**	**3,207,828**
Totals, All Commodities	**2,390,105**	**653,951**	**3,044,056**	**3,338,406**
Saint John—				
Grain	—	638,616	638,616	452,043
Petroleum oil, fuel	258,215	7,072	265,287	273,521
Sugar, raw	185,055	—	185,055	176,811
Flour, wheat	—	147,144	147,144	208,271
Gasoline	132,895	10,261	143,156	140,351
Lumber (planks, boards and flooring) and square timber	9,078	84,262	93,340	88,755
Fertilizers and fertilizer materials	76,389	859	77,248	75,941
Paper, newsprint	—	69,307	69,307	84,688
Potatoes	—	55,972	55,972	30,285
Motor-vehicles and parts	33,620	17,812	51,432	44,202
Totals, Commodities over 50,000 tons in 1953	**695,252**	**1,031,305**	**1,726,557**	**1,574,868**
Totals, All Commodities	**999,934**	**1,474,924**	**2,474,858**	**2,696,391**

Dry Docks.—The Department of Public Works of the Federal Government has constructed five dry docks, one at Kingston, Ont., two at Lauzon, Que., and two at Esquimalt, B.C. The dock at Kingston is under lease to the Kingston Shipbuilding Company. The old Esquimalt dry dock was temporarily transferred to the Department of National Defence on Nov. 1, 1934, and, when commercially required, it will be returned to the control of the Department of Public Works. Each of the large dry docks at Lauzon, Que., and Esquimalt, B.C., can be divided for use of small vessels; the larger Lauzon dock cost approximately $4,500,000 and the larger Esquimalt dock approximately $7,000,000.

7.—Dimensions of Graving Docks Owned by the Federal Government

Location	Length	Width at—			Depth of Water on Sill	Rise of Tide	
		Coping	Bottom	Entrance		Spring	Neap
	ft.	ft.	ft.	ft.	ft.	ft.	ft.
Lauzon, Que., *Champlain*	1,150·0	120·0	105·0	120·0	40·0 H.W.	18	13·3
Lauzon, Que., *Lorne*	600·3	100·0	59·5	62·0	25·7 H.W.	18	13·3
Esquimalt, B.C. (old dock)	450·8[1]	90·0	41·0	65·0	28·8 H.W.[2]	7 to 10	3 to 8
Esquimalt, B.C.	1,173·8	149·0	126·0	135·0	40·0 H.W.	7 to 10	3 to 8
Kingston, Ont	353·5	55·0	47·0	55·0	16·8⅜L.W.	—	—

[1] Face of caisson to vertical face at head, 481·0 ft.; length of pad on which keel blocks rest, 403·5 ft.
[2] Over keel blocks at H.W. 10 ft., tide 26·1 ft.

8.—Dimensions and Cost of Graving Docks Subsidized under the Dry Docks Subsidies Act, 1910

Location	Length	Width	Depth Over Sill	Total Cost	Subsidy
	ft.	ft.	ft.	$	
Collingwood No. 1, Ont	518·3	59·8	15·5	500,000	3 p.c. for 20 years[1]
Collingwood No. 2, Ont	412·0	95·0	16·0	306,965	3 p.c. for 20 years[1]
Port Arthur, Ont	701·0	77·5	16·2	1,258,050	3 p.c. for 20 years[1]
Montreal, Que. (floating dock), *Duke of Connaught*	601·0	98·0	38·0	3,000,000	3½ p.c. for 35 years[1]
Prince Rupert, B.C. (floating dock)	604·0	100·0	28·0[2]	2,199,168	3½ p.c. for 35 years[1]
Saint John, N.B	1,157·8	131·5	40·3	5,500,000	4½ p.c. for 35 years
North Vancouver, B.C. (floating dock)	556·5	98·0	34·5[3]	2,500,000	4½ p.c. for 35 years

[1] Subsidy payments have been completed. [2] 28 ft. over blocks. [3] Over sill (H.W.).

Subsection 3.—Canals

The canals and canalized waters of Canada, under the jurisdiction of the Department of Transport, comprise a series of waterways providing navigation for 1,875 miles inland from salt water. The canals may be divided into two classes: (1) the main or primary canals on the St. Lawrence River and the Great Lakes, including the Lachine, Soulanges, Cornwall and Williamsburg Canals on the St. Lawrence River, the Welland Ship Canal between Lakes Ontario and Erie, and the Sault Ste. Marie Canal between Lakes Huron and Superior; and (2) subsidiary or secondary canals including the St. Peters Canal between Bras d'Or Lake, Cape Breton and the Atlantic Ocean, the St. Ours and Chambly Canals on the Richelieu

River, the St. Anne, Carillon and Grenville Canals on the Ottawa River, the Rideau Canal between the Ottawa River and Lake Ontario, and the Trent and Murray Canals between Lake Ontario and Georgian Bay.

Tonnage passing through this transportation system shows its importance as a highway of commerce: during 1953, 33,373,064 tons of freight passed through, surpassing the peak reached in 1952 when freight traffic amounted to 31,354,139 tons, and comparing with 24,636,462 tons in 1938. In 1953, 27,563 vessels passed through the canals compared with 26,322 in 1952.

In addition to freight and passenger vessels, there are thousands of pleasure craft locked through the canals. The number of passengers on vessels locking at Sault Ste. Marie was 105,366 in 1953 as compared with 97,452 in 1952.

Revenue from canals during the year ended Mar. 31, 1954, amounted to $1,594,891, of which $1,237,648 was derived from rentals for hydraulic and land privileges and wharfage. In the previous fiscal year, the total revenue was $1,532,210, with rentals and wharfage amounting to $1,196,106.

The names of the various canals along these routes, their locations and lengths, together with the numbers and dimensions of the locks thereon and other information may be found in the Department of Transport Bulletin, *Canals of Canada.* A special article on the "Canals of the St. Lawrence Waterway" appears in the 1954 Year Book, pp. 830-833.

Under the jurisdiction of the Federal Department of Public Works are the St. Andrews Lock (length, width and draught, respectively, 215, 45 and 17 ft.) at Selkirk, Man., on the Red River, and the lock at Poupore, Que. There are also a few small isolated locks, each controlled under the authority of the province in which it is situated.

9.—Lengths of Channels and Dimensions of Locks under the Control of the Department of Transport, as at Dec. 31, 1953

Name	Location	Length of Channel	Locks			
			No.	Minimum Dimensions		
				Length	Width	Depth
		miles		ft.	ft.	ft.
St. Lawrence—						
Lachine	Montreal to Lachine	8·74	5	270	45	14[1]
Soulanges	Cascades Point to Coteau Landing	14·67	5	280	46	15[1]
Cornwall	Cornwall to Dickinson Landing	11·00	6	270	43·67	14[1]
Farran Point	Farran Point Rapids	1·28	1	800	50	16[1]
Rapide Plat	Morrisburg	3·89	2	270	45	14[1]
Galop	Iroquois to Cardinal	7·36	3	270	45	14[1]
Welland Ship	Port Weller, Lake Ontario, to Port Colborne, Lake Erie	27·60	8	859	80	30[2]
Sault Ste. Marie	Sault Ste. Marie, Ont.	1·38	1	900	60	18·25
Richelieu River—						
St. Ours	St. Ours, Que	0·12	1	339	45	12
Chambly	Chambly to St. Johns, Que	11·78	9	120·5	23·25	6·5
Ottawa River—						
St. Anne	Junction of St. Lawrence and Ottawa Rivers	0·12	1	200	45	9
Carillon	Carillon Rapids, Ottawa River	0·94	2	200	45	9
Grenville	Long Sault Rapids, Ottawa River	5·94	5	200	45	9

For footnotes, *see* end of table, p 877.

9.—Lengths of Channels and Dimensions of Locks under the Control of the Department of Transport, as at Dec. 31, 1953—concluded

Name	Location	Length of Channel	Locks			
			No.	Minimum Dimensions		
				Length	Width	Depth
		miles		ft.	ft.	ft.
Miscellaneous—						
Rideau	Ottawa to Kingston	123·53	47	134	33	5·5
	Rideau Lake to Perth (Tay Branch)	6·82	2	134	33	5·5
Trent	Trenton to Peterborough Lock, Peterborough	88·74	18	175	33	8[3]
	Peterborough Lock to Swift Rapids	135·71	24	134	33	6
	Swift Rapids to Big Chute[4]	8·00	—	...	...	...
	Big Chute to Port Severn	8·11	1	100	25	6
	Sturgeon Lake to Lindsay (Scugog Branch)	10·00	1	142	33	6
	Lindsay to Port Perry (Scugog Branch)	25·00	—	...	...	4·5
Murray	Isthmus of Murray—Bay of Quinte	7·53[5]	—	...	...	...
St. Peters	St. Peters Bay to Bras d'Or Lake, Cape Breton, N.S.	0·50	1	300	47·4	18[6]

[1] Navigable depths are occasionally less at times of extremely low water. [2] Minimum depth between locks 23 ft. 6 in. [3] A 12-hour notice must be given by vessels of more than 6 ft. draught. [4] Marine railways in this section limit navigation to vessels 50 ft. long, 13·5 ft. beam, 4 ft. draught—weight not over 15 tons. [5] Minimum depth of canal with Lake Ontario at elevation 243 ft. above sea level is 8·5 ft. [6] The depth of canal prism is 17 ft.

Canal Traffic.—The canals of Canada are open to the vessels and traffic of all nations upon equal terms and thus United States traffic constitutes an important part of the total carried through certain canals, especially the Welland Ship Canal. This is shown in Tables **10** and **12**. More complete details of the traffic through canals may be found in DBS annual report, *Canal Statistics*.

10.—Traffic through Canadian Canals, by Nationality of Vessel and Origin of Freight, Navigation Seasons, 1944-53

NOTE.—Figures include duplications where cargoes use two or more canals. Figures from 1886 are available in the corresponding table of previous Year Books beginning with the 1902 edition.

Navigation Season	Nationality of Vessel				Origin of Freight Carried				
	Canadian		United States[1]		Canada		United States[1]		Total
	Vessels	Registered Tonnage	Vessels	Registered Tonnage	Tons	P.C. of Total	Tons	P.C. of Total	Tons
	No.	No.	No.	No.					
1944	20,780	18,191,826	1,911	4,541,575	8,002,746	38·8	12,612,761	61·2	20,615,507
1945	21,064	19,068,308	1,553	3,426,069	10,491,263	47·0	11,829,136	53·0	22,320,399
1946	17,199	16,206,415	1,794	3,221,008	8,904,733	47·7	9,750,186	52·3	18,654,919
1947	18,542	18,613,576	2,332	3,796,293	10,288,481	47·8	11,225,458	52·2	21,513,939
1948	19,859	19,723,768	2,784	4,219,539	11,169,714	47·4	12,389,599	52·6	23,559,313
1949	21,724	20,773,831	2,495	3,260,038	14,800,509	60·7	9,573,243	39·3	24,373,752
1950	21,179	21,989,263	3,241	3,514,202	15,138,009	55·2	12,301,067	44·8	27,439,076
1951	22,141	22,951,468	3,407	4,297,672	16,004,284	54·6	13,320,750	45·4	29,325,034
1952	22,565	25,608,373	3,757	4,201,005	17,245,051^{r}	55·0^{r}	14,109,088^{r}	45·0^{r}	31,354,139^{r}
1953	23,378	29,335,644	4,185	4,037,420	18,464,479	55·3	14,908,585	44·7	33,373,064

[1] Figures include a few vessels and a small tonnage of freight of other foreign nationalities.

11.—Tonnage of Products carried by Canal, by Class of Commodity, Navigation Season, 1953

NOTE.—Figures include duplications where cargoes use two or more canals.

Canal	Agricultural Products	Animal Products	Manufactures and Miscellaneous	Forest Products	Mineral Products	Total
	tons	tons	tons	tons	tons	tons
Sault Ste. Marie	1,805,560	178	1,001,749	183,795	398,127	3,389,409
Welland Ship	5,607,198	1,760	4,136,059	500,288	9,296,845	19,542,150
St. Lawrence River	4,365,733	2,516	3,151,644	529,806	2,032,293	10,081,992
Richelieu River	420	—	93,959	—	—	94,379
St. Peters	1,622	425	819	20	955	3,841
Murray	—	—	676	—	—	676
Ottawa River	—	—	1,047	—	241,985	243,032
Rideau	—	—	188	339	1,004	1,531
Trent	11	—	228	—	—	239
St. Andrews	97	1,909	2,899	10,907	3	15,815
Totals	**11,780,641**	**6,788**	**8,389,268**	**1,225,155**	**11,971,212**	**33,373,064**

12.—Canal Traffic, by Direction and Origin, Navigation Season, 1953

NOTE.—Figures include duplications where cargoes use two or more canals.

Canal	From Canadian to Canadian Ports		From Canadian to United States Ports[1]		From United States to United States Ports[1]		From United States[1] to Canadian Ports	
	Up	Down	Up	Down	Up	Down	Up	Down
	tons	tons	tons	tons	tons	tons	tons	tons
Sault Ste. Marie	558,921	1,704,585	5,360	567,468	175,057	31,306	270,326	76,386
Welland Ship	1,039,269	5,761,360	677,151	106,680	844,382	735,185	21,660	10,356,463
St. Lawrence River	1,959,961	4,994,786	637,094	112,261	304,043	192,944	95,999	1,784,904
Richelieu River	45,047	4,902	24,500	—	—	—	—	19,930
St. Peters	2,052	1,636	—	153	—	—	—	—
Murray	572	104	—	—	—	—	—	—
Ottawa River	735	241,250	—	1,047	—	—	—	—
Rideau	849	682	—	—	—	—	—	—
Trent	131	108	—	—	—	—	—	—
St. Andrews	13,127	2,688	—	—	—	—	—	—
Totals	**3,620,664**	**12,712,101**	**1,344,105**	**787,609**	**1,323,482**	**959,435**	**387,985**	**12,237,683**

Canal	Traffic by Direction		Origins of Cargo		Total Cargo 1953	Total Cargo 1952
	Up	Down	Canada	United States[1]		
	tons	tons	tons	tons	tons	tons
Sault Ste. Marie	1,009,664	2,379,745	2,836,334	553,075	3,389,409	3,295,423
Welland Ship	2,582,462	16,959,688	7,584,460	11,957,690	19,542,150	17,910,756
St. Lawrence River	2,997,097	7,084,895	7,704,102	2,377,890	10,081,992	9,836,395
Richelieu River	69,547	24,832	74,449	19,930	94,379	88,973
St. Peters	2,052	1,789	3,841	—	3,841	3,802
Murray	572	104	676	—	676	380
Ottawa River	735	242,297	243,032	—	243,032	201,151
Rideau	849	682	1,531	—	1,531	921
Trent	131	108	239	—	239	135
St. Andrews	13,127	2,688	15,815	—	15,815	16,203
Totals	**6,676,236**	**26,696,828**	**18,464,479**	**14,908,585**	**33,373,064**	**31,354,139**

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[1] Figures for the United States include small amounts of traffic from other foreign countries.

The figures in Tables **11** and **12** include duplications where the same freight passes through two or more canals, but in Table **13** duplications in the traffic passing through the St. Lawrence and Welland Ship Canals and the Canadian lock at Sault Ste. Marie have been eliminated wherever possible.

Grain trans-shipped at Georgian Bay, Lake Erie, or other ports above Montreal is treated as new cargo and as most of this grain has passed through either the Canadian or United States locks at Sault Ste. Marie there are still duplications in the data because of this treatment. These duplications cannot be avoided when net totals for the Canadian canals are computed because it is impossible to ascertain which lock at Sault Ste. Marie was used by the grain reloaded at Port Colborne, Ont., or other trans-shipping port.

13.—St. Lawrence-Great Lakes Traffic using St. Lawrence, Welland Ship and Sault Ste. Marie Canals, 1953

Canals Used	Up-Bound Freight	Down-Bound Freight	Total
	tons	tons	tons
Traffic using Canadian Canals—			
St. Lawrence only	1,624,659	2,868,449	4,493,108
St. Lawrence and Welland Ship	1,204,894	3,379,847	4,584,741
St. Lawrence, Welland Ship and Sault Ste. Marie	151,808	594,502	746,310
Welland Ship only	1,038,282	7,401,060	8,439,342
Welland Ship and Sault Ste. Marie	187,478	5,584,279	5,771,757
Sault Ste. Marie only	761,729	1,553,277	2,315,006
Totals, Traffic using Canadian Canals	**4,968,850**	**21,381,414**	**26,350,264**
Totals, Traffic using United States Locks at Sault Ste. Marie only	**10,586,057**	**109,070,040**	**119,656,097**
Totals, Canal Traffic	**15,554,907**	**130,451,454**	**146,006,361**

Traffic through the Sault Ste. Marie canals, Canadian and United States, has been approximately twice as heavy as the traffic through the Panama Canal during the latest ten years for which records are available and in 1940 it was almost three times as heavy. Canal traffic has varied from 20,484,000 tons in 1932, which was less than the Panama traffic, to 128,481,596 tons in 1953. The dominant traffic, from a tonnage aspect, is iron ore and during the past 50 years this has fluctuated from 4,901,000 tons in 1892, an average of 50,000,000 tons in the 1920's, a low of 3,607,000 tons in 1932, to a high of 98,657,591 tons in 1953.

Soft coal has usually been second in volume to iron ore, increasing from 8,676,297 tons during the 1949 season to 13,301,048 tons in 1950; there was a decline, however, to 10,684,734 tons in 1951, 9,901,211 tons in 1952, and 8,609,598 tons in 1953.

Although wheat ranks third in tonnage, its value over the past quarter-century has been greater, generally, than that of either iron ore or coal. Other grains have been about one-quarter to one-fifth of the wheat tonnage and a smaller ratio of the value.

The Panama Canal.—The Panama Canal, which was opened to commercial traffic on Aug. 15, 1914, has been a waterway of great importance to the ports of British Columbia, from which vessels leave direct for United Kingdom and other European ports throughout the year. As an alternative route to that of the trans-continental railway lines, this water passage is of vital importance in the solution of the larger transportation problems of the Continent. During World War I, the great expectations based upon the opening of the Canal were not realized, owing to the scarcity of shipping. However, with the post-war decline in ocean freight rates, an increase in traffic between Canada's Pacific ports and Europe took place and, while the proportion carried in vessels of Canadian registry was comparatively small, the cargo tonnage, nevertheless, assumed considerable proportions. During World War II, the volume of Canadian traffic through the Canal was again reduced but has since increased considerably.

14.—Traffic to and from the East and West Coasts of Canada via the Panama Canal, Years Ended June 30, 1944-53

NOTE.—Figures for the years 1921–28 are given in the 1938 Year Book, p. 707, and those for 1929–43 in the 1948–49 edition, p. 738.

Year	Originating on—		Destined for—		Year	Originating on—		Destined for—	
	West Coast	East Coast	West Coast	East Coast		West Coast	East Coast	West Coast	East Coast
	long tons	long tons	long tons	long tons		long tons	long tons	long tons	long tons
1944[1]......	363,220	17,283	30,044	—	1949......	2,298,492	188,506	154,524	145,477
1945[1]......	679,079	65,395	366,118	30,540	1950......	2,707,047	185,076	226,673	143,395
1946.......	1,756,989	184,850	111,161	62,516	1951......	2,910,246	240,904	372,534	142,741
1947.......	2,981,348	316,898	132,521	99,745	1952......	3,644,888	287,872	281,960	114,319
1948.......	2,824,394	244,121	162,561	67,215	1953......	3,560,925	532,810	341,548	219,567

[1] Approximate—exact figures not available.

15.—Commercial Traffic through the Panama Canal, Years Ended June 30, 1944-53

NOTE.—Figures from 1915 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Atlantic to Pacific		Pacific to Atlantic		Totals	
	Vessels	Cargo Tonnage	Vessels	Cargo Tonnage	Vessels	Cargo Tonnage
	No.	long tons	No.	long tons	No.	long tons
1944........................	671	3,354,349	891	3,649,138	1,562	7,003,487
1945........................	924	4,234,935	1,015	4,368,672	1,939	8,603,607
1946........................	1,516	6,118,085	2,231	8,859,855	3,747	14,977,940
1947........................	2,021	8,294,820	2,239	13,375,698	4,260	21,670,518
1948........................	2,286	8,679,140	2,392	15,438,648	4,678	24,117,788
1949........................	2,387	9,899,088	2,406	15,406,070	4,793	25,305,158
1950........................	2,689	9,483,863	2,759	19,388,430	5,448	28,872,293
1951........................	2,784	11,132,472	2,809	18,940,550	5,593	30,073,022
1952........................	3,184	15,128,995	3,340	18,481,514	6,524	33,610,509
1953........................	3,674	17,329,066	3,736	18,766,283	7,410	36,095,349

Subsection 4.—Aids to Navigation

Included under aids to navigation are the lighthouses and the whole system of marine danger signals on the east and west coasts of Canada, on Hudson Bay and Strait, the St. Lawrence River and Gulf, the inland rivers and lakes, and at the entrances to harbours—a very extensive system designed to provide safe navigation in all Canadian waters. In addition, a pilotage service is maintained in waters where navigation is difficult; this service is described under Marine Services at p. 882. As a further aid to safe navigation, there are chains of radio signal and direction-finding stations which are described under radiotelegraphy at pp. 927-928. Lists of aids to navigation, with the exception of very minor ones, are published by the Department of Transport.

16.—Marine Danger Signals maintained in Canada, Years Ended Mar. 31, 1948-54

Note.—In addition to the aids to navigation listed, approximately 9,000 unlighted buoys, balises, dolphins and beacons are maintained. A table showing marine danger signals maintained during the years ended Mar. 31, 1929-40, is given in the 1941 Year Book, p. 581. Figures for 1942 will be found in the 1948-49 edition, p. 716, and for 1943-47 in the 1950 edition, p. 766.

Type of Signal	1948	1949	1950	1951	1952	1953	1954
	No.	No.	No.	No.	No.	No.	No.
Lights	2,469	2,491	2,778	2,841	2,861	2,901	2,876
Lightships	8	8	8	8	8	7	6
Light-keepers	1,120	1,094	1,416	1,353	1,131	1,154	1,083
Fog whistles	9	11	18	22	23	24	18
Sirens	2	2	3	3	3	3	4
Diaphones	169	176	207	212	213	216	211
Fog bells	37	38	43	44	46	46	49
Hand fog horns	137	137	134	133	127	124	122
Hand fog bells	10	10	10	10	12	12	12
Lighted and combination lighted whistling and bell buoys	552	585	618	655	681	719	778
Whistling buoys	39	39	38	38	37	37	36
Bell buoys	112	113	109	110	113	112	115
Fog guns and bombs	12	11	11	10	9	8	9
Fog alarm stations only	10	11	15	15	15	15	15

Navigable waters have been improved greatly by dredging in channels and harbours, by the removal of obstructions, and by the building of remedial works to maintain or control water levels. Incidental to these developments of navigable waters are works to guard shorelines and prevent erosion, and for the control of roads and bridges that cross navigable channels. Ice-breaking operations are carried on at the beginning and at the end of winter to prolong the season of navigation in important waters that freeze over—particularly in connection with sea-going shipping from Montreal, Que.—and to prevent flood conditions during the spring ice break-up.

St. Lawrence River Ship Channel.—This channel extends from about 40 miles below Quebec City to the foot of Lachine Canal at Montreal, a distance of 200 miles of which about 113 miles is dredged channel.

The first minor development began in 1844, on Lake St. Peter, where the limiting depth was 10½ feet at low water. Since 1851, progress in deepening and widening the original natural channel has been more or less continuous through a series of improvement projects in keeping with the increasing demands of trade and the safety of larger and faster vessels.

The present channel above Quebec City has a limiting depth of 35 feet (opened in 1952) at extreme low water and a minimum width of 550 feet, with additional width up to 1,500 feet at all curves and difficult points. This section comprises about 100 miles of dredged channel. Below Quebec the limiting depth of dredged channel, about 13 miles in length, is 30 feet at low tide, with a width of 1,000 feet. An average tidal range of 15 feet in this area provides ample depth for any vessel using the St. Lawrence route. The latest improvement project (1952) comprised the further widening of critical sections and the provision of additional anchorage and turning areas. Annual maintenance requirements owing to silting in this dredged channel are relatively minor above Quebec but below the city silting is more pronounced because of tidal action.

The ship channel is well defined by buoys, and the centre by range lights permitting uninterrupted day and night navigation throughout the open season from about mid-April to early December. The movements of all shipping, weather and ice conditions and obstructions to traffic throughout the St. Lawrence waterway from Fame Point, Que., to Kingston, Ont., are recorded and made available to all concerned through a series of reporting stations known as the Government Signal Service.

A fleet of ice-breaking vessels is maintained to facilitate the movement of shipping between Montreal and the sea during the opening and closing of navigation, as well as to alleviate flood conditions in low-lying areas.

17.—Seasons of Open Navigation on the St. Lawrence Ship Channel, 1935-54

Note.—Figures from 1882 are given in the corresponding table of previous Year Books, beginning with the 1934-35 edition.

Year	Channel Open, Quebec to Montreal[1]	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour	Year	Channel Open, Quebec to Montreal[1]	First Arrival from Sea, Montreal Harbour	Last Departure for Sea, Montreal Harbour
1935.........	Mar. 30	Apr. 15	Dec. 9	1945.........	Apr. 1	Apr. 9	Dec. 3
1936.........	" 28	" 13	" 11	1946.........	" 1	" 12	" 18
1937.........	Apr. 9	" 19	" 8	1947.........	" 16	" 19	" 5
1938.........	" 12	" 18	" 4	1948.........	" 10	" 19	" 10
1939.........	" 29	" 29	" 12	1949.........	" 7	" 7	" 15
1940.........	" 23	" 24	" 5	1950.........	" 18	" 18	" 7
1941.........	" 14	" 19	" 17	1951.........	" 11	" 13	" 13
1942.........	" 17	May 2	" 16	1952.........	" 12	" 13	" 10
1943.........	" 29	" 24	" 13	1953.........	Mar. 30	" 2	" 21
1944.........	" 20	Apr. 21	" 9	1954.........	Apr. 15	Mar. 30	" 15

[1] "Channel Open" means the route can be navigated although there may be floating ice in the river.

Subsection 5.—Marine Services of the Federal Government

The services covered in this Subsection are those dealing with steamship inspection, pilotage service, sea-faring personnel, and the operations of the Canadian Government Merchant Marine Limited and the Canadian National (West Indies) Steamships Limited.

Steamship Inspection.—The Steamship Inspection Service, provided for under Part VII of the Canada Shipping Act, 1934, is responsible for the administration and carrying out of the provisions of the Act respecting the periodic inspection of power-driven ships and the issue of inspection certificates; the assignment of load lines; the conditions under which dangerous goods may be carried in ships; the protection against accident of workers employed in loading and unloading ships; and also for the administration and carrying out of the provisions relating to the certification and employment of marine engineers. The Service has a headquarters staff at Ottawa and staffs of inspectors at the principal ocean and inland ports.

The Board of Steamship Inspection decides on questions arising out of the administration of the Act and takes care of the interests of the Federal Government in schools for marine engineers. A matter of recent concern has been the pollution of the sea by oil, and an international conference of the world's leading maritime nations, at which Canada was represented by the Chairman of the Board of Steamship Inspection, was held at London, England, in April 1954 for the purpose of deciding on measures to deal with this nuisance. A Convention was drawn up at the Conference and signed by the Canadian delegate, subject to ratification by the Canadian Government.

18.—Summary Statistics of Steamship Inspection, Year Ended Mar. 31, 1953

Port	Vessels Subject to Inspection when in Commission		Vessels Inspected				Vessels Not Inspected	
			Registered or Owned in Canada		Registered or Owned Elsewhere			
	No.	gross tonnage	No.	gross tonnage	No.	gross tonnage	No.	gross tonnage
St. John's, N'f'ld..	157	38,972	157	38,972	—	—	—	—
Halifax, N.S.[1].....	159	156,309	152	137,713	1	3,489	6	15,107
Saint John, N.B...	38	58,033	36	44,436	2	13,597	—	—
Quebec, Que......	114	82,195	110	81,949	—	—	4	246
Sorel, Que.........	79	28,928	54	25,499	—	—	25	3,429
Montreal, Que.....	205	489,959	138	391,393	2	36,154	65	62,412
Kingston, Ont.....	88	81,304	87	81,289	—	—	1	15
Toronto, Ont......	185	456,848	177	454,305	1	1,620	7	923
St.Catharines,Ont.	74	213,425	74	213,425	—	—	—	—
Collingwood, Ont..	82	204,336	79	204,169	—	—	3	167
Midland, Ont.....	86	140,905	72	140,353	—	—	14	552
Port Arthur, Ont..	137	78,056	45	71,145	—	—	92	6,911
Vancouver, B.C...	400	194,546	356	178,632	1	7,459	43	8,455
Victoria, B.C.....	76	70,689	60	55,581	—	—	16	15,108
Totals........	**1,880**	**2,294,505**	**1,597**	**2,118,861**	**7**	**62,319**	**276**	**113,325**

[1] Includes North Sydney, N.S.

Pilotage.—Pilotage service functions under the provisions of Part VI of the Canada Shipping Act. Wherever a pilotage district has been created by the Governor in Council, qualified pilots are licensed by the pilotage authority of the district.

There are in Canada 42 pilotage districts in nine of which the Minister of Transport is the pilotage authority (*see* Table 19), while in each of the other districts the pilotage authority is a local body appointed by the Governor in Council.

19.—Pilotage Service, by Districts, Years Ended Mar. 31, 1952 and 1953

District	1952		1953	
	Ships	Net Registered Tonnage	Ships	Net Registered Tonnage
	No.		No.	
Bras d'Or Lake, N.S.	57	248,006	52	236,916
Sydney, N.S.	1,828	3,567,800	2,146	3,814,195
Halifax, N.S.	2,967	10,868,837	3,126	11,391,993
Saint John, N.B.	1,276	3,609,643	1,456	4,170,954
Quebec, Que.	4,552	15,269,456	4,956	16,731,634
Montreal, Que.	8,235	14,755,504	7,053	16,648,762
St. Lawrence-Kingston-Ottawa, Ont.	..	..	..	..
Churchill, Man.	42	177,224	54	194,464
British Columbia	3,365	8,838,804	3,993	11,893,990
Totals	**22,322**	**57,335,274**	**22,836**	**65,082,908**

In addition, there are 21 districts in the Province of Newfoundland under local pilotage authority. These districts are administered under Newfoundland statutes which, since the date of union with Canada, come under federal jurisdiction. Part VI of the Canada Shipping Act with respect to pilotage has not been proclaimed in force in Newfoundland.

Seamen Shipped and Discharged.—Seamen shipped and discharged at Canadian ports under the provisions of the Canada Shipping Act during the years ended Mar. 31, 1944-53, are shown in Table **20**.

20.—Seamen Shipped and Discharged at Canadian Ports, Years Ended Mar. 31, 1944-53

NOTE.—Figures from 1918 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Year	Seamen Shipped	Seamen Discharged	Year	Seamen Shipped	Seamen Discharged
	No.	No.		No.	No.
1944	26,068	20,491	1949[1]	50,379	49,544
1945	29,230	25,056	1950	43,677	43,194
1946	30,361	27,042	1951	40,241	40,535
1947	43,973	42,205	1952	43,724	40,664
1948	59,768	60,793	1953	42,723	36,610

[1] Figures for Newfoundland are included from Apr. 1, 1949.

Canadian Government Merchant Marine Limited.—The circumstances under which the Canadian Government became possessed of, and responsible for, the operations of a merchant marine are explained in the 1934-35 Year Book, p. 776. A table showing the operating results from 1919 to 1936 is given in the 1937 Year Book, p. 689.

The original fleet of the Canadian Government Merchant Marine Limited consisted of 66 vessels with a total deadweight tonnage of 391,212. The original cost of the fleet was $79,661,921 and the capital loss thereon was $74,239,356. The total capital recovery of $5,422,565 was as follows: (1) the sale of 56 vessels for $2,378,018; (2) the proceeds of insurance on four vessels lost amounting to $2,111,475; and (3) the sale of six vessels for $933,072 to the Canadian National (West Indies) Steamships Limited.

The Charter of the Canadian Government Merchant Marine Limited and its subsidiary companies, although inactive since 1936, was not surrendered and in 1940 the Company was reconstituted and, on behalf of the Government of Canada, operated certain ships seized in prize and either requisitioned for use by the Canadian Government or condemned by the Court. When settlement with the owners of requisitioned ships for charter hire had been completed, the organization once more became inactive.

Canadian National (West Indies) Steamships Limited.—In conformity with the Canada-West Indies Trade Agreement of 1926 (16-17 Geo. V, c. 16) the Federal Government has provided direct steamship services to the West Indies through the medium of Canadian National (West Indies) Steamships Limited.

At the end of 1953, the Canadian National Steamships owned and operated eight vessels in service between Canada and the British West Indies.

21.—Financial Statistics of Canadian National (West Indies) Steamships Limited, 1944-53

NOTE.—Figures for the years 1929-38 are given in the 1942 Year Book, p. 620, and for 1939-43 in the 1950 edition, p. 777.

Year	Operating Revenue	Operating Expenditure	Operating Net	Depreciation	Interest	Book Loss or Surplus
	$	$	$	$	$	$
1944	5,378,059	3,160,568	+2,217,491	243,158	651,246	+1,271,387
1945	4,412,252	2,569,626	+1,842,626	279,466	612,999	+1,116,086
1946	6,669,129	4,671,148	+1,997,981	288,092	596,499	+1,302,052
1947	7,857,471	6,534,600	+1,322,871	493,594	573,298	+522,677
1948	7,964,720	6,828,392	+1,136,328	492,222	563,794	+166,044
1949	6,595,007	5,985,873	+609,134	492,222	577,410	−460,498
1950	5,124,200	5,220,806	−96,606	371,699	560,462	−1,028,767
1951	6,808,478	6,337,987	+470,491	371,699	565,784	−466,992
1952	7,449,247	6,605,514	+843,733	372,392	475,250	−3,909
1953	4,509,342	4,892,150	−382,808	268,772	475,250	−1,126,830

Subsection 6.—The St. Lawrence Seaway

The development of the St. Lawrence waterway with its ship channel and system of canals is reviewed in the 1954 Year Book at pp. 830-833. A special article on "The St. Lawrence Power Project" dealing with joint international development of power on the International Rapids section of the St. Lawrence River will be found at pp. 549-553 of this edition.

THE ST. LAWRENCE SEAWAY*

The St. Lawrence Seaway project envisages the provision of 27-foot navigation from Montreal, Que., to the head of the Great Lakes, a distance of over 2,000 miles. Associated with the necessary navigation works is the development of power at two, and possibly three sites on the St. Lawrence River. At the first site, in the International Rapids section, where the River marks the boundary between Canada and the United States, a total of 2,200,000 h.p. is to be developed and divided equally between the two countries. At the second site in the Soulanges section, the Beauharnois power development already harnesses over 1,300,000 h.p. and can be expanded eventually to 2,000,000 h.p. The third possible site is in the Lachine section, where a capacity of 1,200,000 h.p. could be developed. At the two latter sites the River is entirely within Canadian territory and the power developments there are at the discretion of the Province of Quebec.

Existing Navigation Facilities.—It is convenient to distinguish between the St. Lawrence Seaway project and the St. Lawrence Ship Channel. The Seaway is to extend *above* Montreal. The St. Lawrence Ship Channel (*see* p. 881) is a Canadian improvement to the natural channel in the section *below* Montreal to deep water in the Gulf of St. Lawrence. The Ship Channel provides the approach to the Seaway and when the latter is in operation will comprise an integrated waterway with it.

The present St. Lawrence canals replace an earlier 9-foot canal system completed about 1850, after the union of Upper and Lower Canada. They were completed by 1904 and provide a 14-foot channel from Montreal to Lake Ontario. Most of the locks are 270 ft. long and have a usable length of 256 ft., but are limited by their depth and by the $43\frac{2}{3}$-foot width of the Cornwall Canal.

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* Prepared by G. Gordon McLeod, Economist, Dept. of Transport, Ottawa, with the approval of the Hon. Lionel Chevrier, President, St. Lawrence Seaway Authority.

In 1952, a new Welland Ship Canal, which follows in part the route of the earlier Welland Canal, was opened to traffic. Built by Canada as a link in the projected Seaway, the general dimensions of its locks have been taken as standard for the new canals now to be built. Seven of its eight locks are 859 ft. long, and of a usable length of 765 ft.; the eighth lock is 1,380 ft. long. They are 80 ft. wide and 30 ft. deep over the sills. The limiting depth in the channels between the locks is 25 ft., though the channels could be deepened by dredging to provide a minimum depth throughout of up to 30 ft.

The United States, in successive programs, has deepened the navigation channels in the St. Mary's River between Lake Superior and Lake Huron, and in the St. Clair and Detroit Rivers between Lakes Huron and Erie. Available depths there are now approximately 25 ft. in downbound channels and 21 ft. in upbound channels. At Sault Ste. Marie, Canada has built one lock, and the United States has built six and retired two, so that, all-told, five are now in operation. The largest of these is the McArthur Lock completed in 1943 by the United States: it is 80 ft. wide, 800 ft. long, and has 31 ft. of water over the sills.

Projected Works.—It will be apparent that existing navigation facilities provide 25-foot navigation throughout the Great Lakes—from the Lakehead to Prescott, Ont. The great fleet that sails these inland waters is understood to provide the cheapest transportation in the world, and the largest existing vessels are capable of carrying 20,000- to 25,000-ton loads. Below Montreal, the St. Lawrence Ship Channel accommodates all but the largest ocean vessels and has made that city a major world port. But between Montreal and Lake Ontario the 14-foot canals with their small locks constitute a bottleneck which will let only small vessels pass which carry little more than 2,500 tons. The breaking of this bottleneck is the essential part of the Seaway plan.

The St. Lawrence River above Montreal divides naturally into five sections and major works are required in three of them. First, in the International Rapids section, the main power works include an upper control dam near Iroquois, Ont., a main dam and power-houses near Cornwall, and channel enlargement to reduce current velocities in some stretches. Two short side canals, one at each of the dams, will carry 27-foot navigation past these obstacles.

The second section is the Soulanges. The present canal for the Beauharnois, Que., power development incorporates a 27-foot navigation channel along one side. The necessary locks and short access channels remain to be added.

The third section is Lachine. Here, the minimum development will be a 10-mile canal and considerable channel enlargement. A combined development for power and navigation is possible here too but, for the present, the St. Lawrence Seaway Authority has announced a plan—for navigation only—for this section.

In the remaining two sections, Lake St. Francis and the Thousand Islands, comparatively minor channel dredging is required. Within the Great Lakes area, the Welland Ship Canal will be deepened to 27 ft., and the achievement of the Seaway standards will require considerable dredging in the St. Clair-Detroit passage into Lake Huron and in the St. Mary's River to Lake Superior.

International Arrangements.—The St. Lawrence waterway and international power development have been the subject of lengthy discussions and negotiations between Canada and the United States from before the turn of the century. A treaty on the matter was signed in 1932 but was rejected by the United States Senate. Renewed negotiations produced the Great Lakes-St. Lawrence Basin

Agreement of 1941, but this agreement was neither approved nor rejected by Congress. After more than 11 years of uncertainty in this respect, Canada, having advanced an alternative plan for development, finally ended the agreement on Nov. 4, 1952.

Both the 1932 treaty and the 1941 agreement had provided that the governments of the two countries would construct jointly all the works—power as well as navigation—the power facilities to be turned over on completion to an appropriate agency within each country. In 1951, Canada proposed that separate agencies be authorized to construct the power works, on the understanding that Canada would thereupon complete a 27-foot waterway from Montreal to Lake Erie. This would involve building the two canals in the International Rapids section of the River, previously planned for the United States side, as well as the other canals in the Canadian sections. It would also involve deepening the Welland Canal but not the channels linking the upper lakes, which historically have been a United States responsibility.

In December 1951, the Government of Canada concluded an agreement with the Government of Ontario concerning the international power development and, in the same month, legislation was passed providing for the creation of a Crown company, the St. Lawrence Seaway Authority, to build and operate the Canadian canals.

The power development in the International Rapids section required the approval of the International Joint Commission, under the Boundary Waters Treaty of 1909. The preparation of joint submissions from the two Federal Governments to the Commission was initiated by an exchange of notes on Jan. 11, 1952. On June 30, 1952, the two countries formally agreed to the new plan in an exchange of notes, which set out in detail the Canadian undertaking, and on the same date each made submissions to the International Joint Commission, which issued an Order of Approval on Oct. 29, 1952.

On July 15, 1953, the United States Federal Power Commission issued a licence to the Power Authority of the State of New York to develop the United States share of the power, but the licence was challenged in the United States courts. It was upheld by a unanimous decision of the Court of Appeals for the District of Columbia on Jan. 29, 1954. The decision was appealed to the United States Supreme Court which, on June 7, 1954, announced it would not entertain the appeal.

United States Participation.—The same United States Supreme Court decision opened the way for construction of the navigation works, which depend upon the existence of the power works and would be inoperative without them. Meanwhile, legislation passed in Congress, and approved by the President, in May 1954 created a St. Lawrence Seaway Development Corporation, and ordered it to construct the two United States canals in the International Rapids section of the St. Lawrence River as part of the Seaway system.

The United States proposal was discussed at meetings held in Ottawa, Ont., during July and August 1954. The arrangements of June 30, 1952, were modified, Canada agreeing to be relieved of its undertaking to build one of the canals in the International section near Cornwall and at the same time declaring its intention to proceed with the construction of a canal at Iroquois. Whether the United States will build a canal at that point on the American side is not yet determined.

June 7, 1954, the date of the United States Supreme Court decision in favour of the St. Lawrence Seaway and power development, promises to be a historic date for both Canada and the United States—another link in the chain of co-operative friendship between two great continental neighbours. As a result of this decision, both the Hydro-Electric Power Commission of Ontario and the Power Authority of the State of New York called, in August 1954, for their first tenders for the construction of power works—and construction started almost immediately. In September, first tenders were called by the St. Lawrence Seaway Authority (followed by the United States Corporation) for construction of the navigation works and work began on that aspect of the undertaking before the close of the 1954 construction season.

Section 2.—Financial Statistics of Waterways

The principal statistics available of the cost of water-borne traffic consist of the record of public expenditure on waterways. Such expenditure may be classified as capital expenditure, or investment and expenditure for maintenance and operation. Revenue from operation is also recorded. In so far as capital expenditure for the permanent improvement of waterways is concerned, that of the Federal Government covers the major part. There has been some expenditure by municipalities on local harbour facilities, and private capital expenditure is also confined almost entirely to terminal or dockage facilities. The investment in shipping, however, with the exception of the Canadian Government Merchant Marine Limited and the Canadian National (West Indies) Steamships Limited, has come almost entirely from private sources. No figures are available regarding private investment in shipping except those appearing in the reports of the operating companies that cover only a portion of the field. There are no statistics showing the revenue of ship operators from passenger and freight traffic.

Capital Expenditure.—The only figures available of federal capital expenditure on Canadian waterways are those compiled from the *Public Accounts* and the annual reports of the Departments of Transport, Public Works and Finance. However, such expenditure cannot be regarded as any indication of the present worth of the undertakings represented. The cost of building canals and other waterways and permanent works to facilitate water transportation in Canada is represented in such reports at their original book values, no deductions having been made from the cumulative totals for depreciation from year to year or for abandonment of earlier works which have been superseded, as for instance, in the first Welland Canals. To this extent such figures are an overstatement of the present value of the works in use. There is a further limitation that should be noted in regard to such figures: they do not include the cost of maintenance and improvements or the operation of these works, such charges having been made to the consolidated deficit account as annual expenditure and not to capital account. Table **22**, which shows capital expenditure on canals, marine services and miscellaneous water-transport facilities to have reached the grand total of $434,809,000, must be interpreted with the above qualifications in mind. In Table **23**, the capital values of the fixed assets administered by the National Harbours Board are shown as at Dec. 31, 1952 and 1953, and are in addition to the capital expenditure of Table **22**. Figures in Table **23** reflect the capital situation in regard to the national harbours of Canada far better than do those of Table **22** in the case of waterways and facilities, inasmuch as they include all buildings, machinery and durable plant improvements; they also have been subject to deductions for depreciation and the scrapping or abandonment of plant and hence more nearly approach the present value of the properties under the administration of the National Harbours Board.

Table 24 on p. 890 shows the amounts advanced by the Federal Government to the National Harbours Board for capital expenditure in 1951, 1952 and 1953.

22.—Capital Expenditure of the Federal Government on Canals, Marine Services and Miscellaneous Water-Transport Facilities, as at Mar. 31, 1952 and 1953

NOTE.—Compiled from annual reports of the Department of Transport and the Public Accounts.

Canals and Marine Services	Expenditure		
	Years Ended Mar. 31— 1952	Years Ended Mar. 31— 1953	Total to Mar. 31, 1953
	$	$	$
Canals			
Quebec Canals—			
Beauharnois (old)	Cr. 4,500[1]	—	1,622,969
Carillon and Grenville	—	—	4,191,727
Chambly (Richelieu R.)	—	—	780,619
Lachine	Cr. 24,977[1]	Cr. 428,446[1]	13,590,014
Lake St. Francis	—	—	75,907
Lake St. Louis	—	—	298,176
Soulanges	Cr. 1[1]	—	7,897,119
Ste. Anne	—	—	1,320,216
St. Ours	—	—	735,964
Ontario-St. Lawrence Canals—			
Cornwall	—	—	7,233,823
Williamsburg Canals	—	—	1,334,552
Farran Point	—	—	877,091
Rapide Plat	—	—	2,159,881
Galop	—	—	6,143,468
Galop Channel	—	—	1,039,896
North Channel	—	—	1,995,143
River Reaches	—	—	483,830
St. Peters, N.S.	—	—	648,547
Culbute Lock and Dam (Ottawa R.)	—	—	382,391
Rideau	—	—	4,213,961
Tay	—	—	489,599
St. Lawrence Ship (surveys)	—	—	133,897
Sault Ste. Marie	—	—	4,935,809
Trent	Cr. 401[1]	Cr. 295[1]	19,950,052
Murray	—	—	1,248,947
Welland Ship	Cr. 11,982[1]	Cr. 12,814[1]	131,788,461
Prior Welland Canals	Cr. 16,235[1]	Cr. 20,955[1]	27,248,097
Canals generally	—	—	34,967
Adjustment suspense	—	—	165,361
Totals, Canals	**Cr. 58,096[1]**	**Cr. 462,510[1]**	**243,020,484**
Marine Services			
Marine Service steamers	9,692,262	4,797,748	23,608,319
River St. Lawrence Ship Channel contract dredging	1,103,572	3,133,302	105,149,397
Totals, Marine Services	**10,795,834**	**7,931,050**	**128,757,716**

Miscellaneous Facilities	Expenditure		
	Years Ended Mar. 31— 1952	Years Ended Mar. 31— 1953	Total to Mar. 31, 1953
	$	$	$
Miscellaneous Facilities[2]			
Bare Point breakwater	—	—	217,996
Burlington Bay Canal	—	—	308,328
Burlington Channel improvements	190	13,015	1,487,004
Cape Tormentine Harbour	—	—	95,000
Esquimalt graving dock	134,752	148,214	8,325,972
Georgian Bay to Montreal waterway survey	—	—	918,797
Halifax elevator site	—	—	86,512
Kingston graving dock	—	15,849	572,438
Lake St. Peter	—	—	1,164,235
Lévis graving dock	393,125	326,957	2,466,904
Miscellaneous wharves	—	—	1,005,929
Port Arthur, Fort William and River Kaministikwia improvements	1,367,860	1,451,701	21,672,195
Port Colborne Harbour	104,865	33,945	1,161,565
Rainy River Lock and Dam	—	—	134
Sorel Harbour improvements	299,601	89,757	3,393,810
St. Andrews Rapids and Red River improvements	171,578	102,116	2,100,924
Tiffin Harbour improvements	—	—	481,622
Toronto Harbour improvements	579,580	35,156	10,959,019
Upper St. Lawrence River Channel improvements	—	—	468,098
Victoria, B.C., Harbour improvements	8,360	30,205	5,377,206
Victoria, Ont., Harbour improvements	641	3,575	767,119
Totals, Miscellaneous	**3,060,552**	**2,250,490**	**63,030,807**
Summary			
Canals	Cr. 58,096	Cr. 462,510	243,020,484
Marine Services	10,795,834	7,931,050	128,757,716
Miscellaneous facilities	3,060,552	2,250,490	63,030,807
Grand Totals	**13,798,290**	**9,719,030**	**434,809,007**

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[1] Sales of property, stone, etc.

[2] These are works not covered elsewhere in these tables and are shown in the *Public Accounts* as schedules to the Balance Sheet of the Government of Canada.

23.—Capital Values of Fixed Assets administered by the National Harbours Board, as at Dec. 31, 1952 and 1953

Note.—Compiled from the annual reports of the National Harbours Board.

Item	1952	1953
	$	$
Harbour dredging	12,199,604	12,199,604
Real estate	12,382,257	12,387,040
Vehicular bridges	202,186	201,976
Roads, fences and boundaries	2,001,902	2,020,710
Sewers and drains	825,919	830,430
Miscellaneous structures	737,850	734,222
Wharves and piers	92,294,626	91,941,026
Permanent sheds	24,356,545	24,061,431
Shed hoists and electrical cranes	249,283	315,314
Railway systems	7,748,661	6,423,469
Grain elevator systems	41,862,130	41,778,429
Cold-storage systems	5,881,970	5,936,207
Office furniture and appliances	197,888	210,223
Harbour buildings	1,753,361	1,766,280
Central heating plants	128,073	128,073
Harbour shops	336,375	270,336
Electric power systems	1,260,242	1,271,590
Water supply systems	984,235	978,867
Floating equipment	2,212,700	2,210,961
Shore equipment	980,848	986,557
Miscellaneous small plant	598,044	614,341
Engineering — general surveys	109,441	109,441
Works under construction	827,753	6,449,188
Sundry expenditure—undistributed	3,769,450	3,769,450
Bridge construction, right-of-way, etc	18,565,765	18,568,155
Totals	**232,467,108**	**236,163,320**

24.—Amounts Advanced by the Federal Government to the National Harbours Board for Capital Expenditure, 1951-53

Note.—Compiled from the annual reports of the National Harbours Board.

Harbours and Properties	1951	1952	1953
	$	$	$
Halifax	1,042,951	322,169	882,145
Saint John	—	721,455	2,536,408
Chicoutimi	—	—	—
Quebec	27,254	139,667	776,682
Three Rivers	2,542	—	106,395
Montreal	898,823	654,158	689,389
Port Colborne elevator	49,648	—	2,186
Churchill	174,882	2,234	182,055
Vancouver	90,698	307,399	589,559
Totals	**2,286,798**	**2,147,082**	**5,764,819**

Waterway Expenditure and Revenue on Consolidated Fund Account.—Expenditure under this heading (Tables **25** to **27**) is mainly for the operation and maintenance of various facilities for water transport but, unfortunately, the line between operation and maintenance expenditure is not as finely drawn as is desirable.

In addition to the recurrent expenditure shown here, to facilitate water transportation, the Federal Government expends annually a considerable amount to cover deficits of the Canadian National (West Indies) Steamships Limited and of the National Harbours Board, for mail subsidies and steamship subventions as shown in Table **30**. Operating expenditure and revenue of facilities administered by the National Harbours Board are shown separately in Table **29**. Revenue in connection with waterways of the Department of Transport and the Department of Public Works is shown in Table **28**.

25.—Expenditure on Canals Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1952 and 1953

NOTE.—Compiled from the annual reports of the Department of Transport.

Canal	Expenditure on Improvements: Year Ended Mar. 31, 1952	Expenditure on Improvements: Year Ended Mar. 31, 1953	Expenditure on Improvements: Total to Mar. 31, 1953
	$	$	$
Main Canals—			
Quebec Canals—			
Beauharnois (old)	32,804	32,138	420,582
Hungry Bay Dyke	—	—	55,659
Lachine	2,597,530	2,862,394	12,409,805
Lake St. Francis	—	—	55,324
Quebec Dredging Fleet	—	12,769	197,918
Soulanges	31,541	94,733	877,281
Superintending Engineer	2,174	—	2,174
Ontario-St. Lawrence Canals	—	—	336,906
Cornwall	202,401	385,167	1,844,523
Williamsburg	17,928	410,679	972,217
Welland Canals—			
Welland Ship	87,405	236,017	2,400,436
Prior Welland Canals	—	—	2,650,121
Sault Ste. Marie	59,307	4,229	636,869
Secondary Canals—			
Carillon and Grenville	—	5,395	1,119,610
Chambly (Richelieu R.)	19,356	27,989	1,341,969
Rideau and Tay	27,635	41,771	1,396,266
Ste. Anne	—	—	232,812
St. Ours (Richelieu R.)	1,816	—	217,632
St. Peters, N.S.	—	4,452	966,294
Trent	178,621	262,537	5,207,293
Murray	—	1,422	222,409
Miscellaneous—			
Bay Verte, Chignecto	—	—	44,388
Culbute Lock and Dam (Ottawa R.)	—	—	60,923
Surveys and inspections	—	—	572,990
Canals generally	—	—	190,509
Totals	**3,258,518**	**4,381,692**	**34,432,910**

Canal	Expenditure on Operation and Maintenance: Year Ended Mar. 31, 1952	Expenditure on Operation and Maintenance: Year Ended Mar. 31, 1953
	$	$
Administration, Ottawa	97,779	112,881
Quebec Canals—		
Head Office	56,702	59,684
Beauharnois (old)	24,968	12,499
Carillon and Grenville Canals	130,910	127,387
Chambly (Richelieu R.)	157,371	179,210
Hungry Bay and Ste. Barbe Dykes	4,452	5,007
Lachine	707,613	1,156,128
Quebec Dredging Fleet	38,799	35,901
Soulanges	360,508	395,451
Ste. Anne	21,823	22,979
St. Ours (Richelieu R.)	20,241	30,926
Ontario-St. Lawrence Canals—		
Head Office	84,447	100,957
Cornwall	407,120	475,641
Williamsburg Canals	210,271	241,448
St. Peters, N.S.	40,790	37,499
Rideau and Tay Canals	383,839	408,798
Sault Ste. Marie	152,594	160,013
Trent	425,209	439,153
Murray	24,661	28,280
Welland Canals	1,365,829	1,495,720
St. Lawrence Ship Canal surveys, etc.	16,100	71,653
Totals	**4,732,026**	**5,597,215**

26.—Marine Service Expenditure Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1952 and 1953

NOTE.—Compiled from annual reports of the Department of Transport.

Marine Services	1952	1953
	$	$
Marine Services—		
Administration, including agencies	500,778	549,578
Aids to navigation (construction, maintenance and supervision)	4,740,680	5,840,716

Marine Services	1953	1953
	$	$
Nautical Services—		
Administration	142,688	142,578
Administration, operation and maintenance, including grants	334,807	287,542
Construction	21,309	—
Marine Services—war appropriations	70	—

26.—Marine Service Expenditure Charged to Consolidated Deficit Account, Years Ended Mar. 31, 1952 and 1953—concluded

Marine Services	1952	1953	Marine Services	1952	1953
	$	$		$	$
Nautical Services—concl.			Marine Service Steamers—		
Replacement of machinery and equipment destroyed by fire at l'Ecole d'Arts et Métiers de Rimouski, Que.	90,950	—	Administration	57,784	61,109
Reimbursement to Ecole Technique de Rimouski, incorporated for the purchase of machinery and equipment	—	56,774	Operation and maintenance	4,251,733	4,663,095
Pilotage Service—			Marine Signal Service	161,997	185,705
Administration	398,675	468,731	River St. Lawrence Ship Channel Service—		
Construction	64,628	78,434	Administration, operation and maintenance	1,368,825	874,332
Pensions to former pilots	2,243	2,100	Surveys and investigations	—	28,839
Steamship Inspection	453,953	509,550	Transferred to Marine Services—investment	Cr.5,746,075	—
			Totals	**6,845,045**	**13,749,083**

27.—Expenditure on Waterways Charged to Consolidated Fund Account by Department of Public Works, Years Ended Mar. 31, 1952 and 1953

Note.—Compiled from the annual reports of the Departments concerned by the Comptroller of the Treasury, Department of Finance.

Year and Item	Dredging	Construction	Improvements and Repairs	Staff and Sundries	Total
	$	$	$	$	$
1952					
Harbours and Rivers—					
Newfoundland	676,494	821,829	837,327	137,245	2,472,895
Prince Edward Island	307,622	275,966	564,724	67,002	1,215,314
Nova Scotia	474,364	922,533	784,181	140,117	2,321,195
New Brunswick	806,420	309,531	425,037	346,802	1,887,790
Quebec	708,039	3,511,693	1,488,198	519,441	6,227,371
Ontario	1,340,505	526,242	2,357,660	373,181	4,597,588
Manitoba	154,697	133,248	74,918	85,582	448,445
Saskatchewan	—	73,054	3,147	1,495	77,696
Alberta	25,223	709	47,165	63,524	136,621
British Columbia	1,084,160	2,389,829	466,080	660,225	4,600,294
Yukon Territory	7,718	—	426	7,580	15,724
Northwest Territories	39,304	54,550	27,223	—	121,077
General	—	38,607	—	152,204	190,811
Totals, Harbours[1] and Rivers	5,624,546	9,057,791	7,076,086	2,554,398	24,312,821
Dredging plant	—	663,372	72,252	—	735,624
Roads and bridges	—	23,425	75,570	35,847	134,842
Totals, 1952	**5,624,546**	**9,744,588**	**7,223,908**	**2,590,245**	**25,183,287**
1953					
Harbours and Rivers—					
Newfoundland	723,645	512,063	1,422,746	159,890	2,818,344
Prince Edward Island	392,562	377,305	995,641	74,615	1,840,123
Nova Scotia	935,620	1,022,506	1,413,871	155,115	3,527,112
New Brunswick	894,717	608,345	425,141	343,356	2,271,559
Quebec	933,945	2,786,031	1,359,330	520,078	5,599,384
Ontario	627,290	3,247,890	648,114	471,272	4,994,566
Manitoba	140,232	72,811	95,248	126,779	435,070
Saskatchewan	—	12,045	248	5,591	17,884
Alberta	27,311	2,661	29,103	84,734	143,809
British Columbia	664,777	2,134,644	1,323,122	733,599	4,856,142
Yukon Territory	19,569	—	159,983	5,348	184,900
Northwest Territories	75,673	47,684	46,570	—	169,927
General	—	—	—	138	138
Totals, Harbours[1] and Rivers	5,435,341	10,823,985	7,919,117	2,680,515	26,858,958
Dredging plant	—	410,265	62,082	—	472,347
Roads and bridges	—	110,680	145,353	43,234	299,267
Totals, 1953	**5,435,341**	**11,344,930**	**8,126,553**	**2,723,749**	**27,630,573**

[1] Exclusive of harbours under the National Harbours Board as shown in Table 29.

28.—Revenue of the Federal Government in Connection with Waterways, Years Ended Mar. 31, 1952 and 1953

NOTE.—Compiled from Annual Reports of the Department of Transport and the *Public Accounts.*

Item	1952	1953
	$	$
Department of Transport		
CANALS SERVICE		
Lachine	317,093	351,754
Soulanges	3,017	2,944
Chambly	3,726	3,336
Ste. Anne's Lock	836	250
St. Ours	270	329
Carillon and Grenville	1,652	1,121
Beauharnois	49,395	49,435
Quebec dredging fleet	73	5
Cornwall	66,739	54,890
Williamsburg	13,737	11,859
St. Peters, N.S.	237	310
Welland Canals	899,714	925,783
Sault Ste. Marie	3,099	4,041
Rideau and Tay Canals	17,097	15,583
Trent	88,837	95,464
Murray	551	556
Sale of publications	39	38
Premium, discount and exchange	3	—
Miscellaneous	142	168
Refunds of previous year's expenditure	36,063	14,411
TOTALS, CANALS SERVICE	1,502,320	1,532,277
MARINE SERVICE		
Fines and forfeitures	19,660	20,447
Steamship inspection	176,909	180,689
Wharf revenue	237,256	245,357
Harbour dues	57,327	64,381
Measuring surveyors' fees	381	488
Examinations — masters' and mates' fees	7,389	7,423
Pilots' licence fees (pilotage)	248	317
Pilotage dues	1,469	7,933
Shipping fees	3,996	3,566
Marine steamers' earnings	35,223	56,958
Signal station dues	1,462	1,409
Rentals — water lots and lighthouse sites	20,390	15,857
Rentals — miscellaneous	12,262	850
Sale of land, buildings, etc.	6,073	6,009
Merchant seamen's identity certificates	3,182	2,698
MARINE SERVICE—concluded		
Miscellaneous	13,552	7,070
Refund of previous year's expenditure	24,171	21,006
TOTALS, MARINE SERVICE	620,950	642,458
BOARD OF TRANSPORT COMMISSIONERS		
Licences to ships	1,885	1,577
Sale of publications	213	237
Sundries	100	—
TOTALS, BOARD OF TRANSPORT COMMISSIONERS	2,198	1,814
Totals, Dept. of Transport	**2,125,468**	**2,176,549**
Department of Public Works		
EARNINGS OF DRY DOCKS		
Champlain Dock, Lauzon, Que.	86,366	87,888
Lorne Dock, Lauzon, Que.	29,000	33,052
Esquimalt new dock	95,797	194,258
Esquimalt old dock	1,925	—
Selkirk repair slip	3,566	3,781
TOTALS, EARNINGS	216,654	318,979
WORKS AND PLANTS LEASED		
Kingston dry dock	9,025	9,025
Ferry privileges	484	355
Dredges and plants	35,512	46,439
TOTALS, LEASED	45,021	55,819
Rents from water lots, etc.	18,456	28,808
Refunds against expenditure reported in previous years	74,605	47,539
Sundry receipts	11,357	14,693
Totals, Dept. of Public Works	**366,093**	**465,838**

29.—Operating Revenue and Expenditure of Harbours, Elevators and Bridges under the National Harbours Board, 1949-53

Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income
	$	$	$
Halifax—			
1949	1,300,605	893,699	406,906
1950	1,158,425	895,757	262,668
1951	1,338,348	1,044,779	293,569
1952	1,606,576	1,251,530	355,046
1953	1,671,954	1,224,866	447,088
Saint John—			
1949	715,423	501,163	214,260
1950	627,860	511,328	116,532
1951	728,648	576,255	152,393
1952	906,517	661,184	245,333
1953	864,760	697,702	167,058

29.—Operating Revenue and Expenditure of Harbours, Elevators and Bridges under the National Harbours Board, 1949-53—concluded

Harbour and Year	Operating Revenue	Operating Expenditure	Operating Income
	$	$	$
Montreal—			
1949	6,272,697	3,663,798	2,608,899
1950	6,324,037	3,500,606	2,823,431
1951	7,478,227	4,053,329	3,424,898
1952	8,692,656	4,567,823	412,433
1953	9,064,500	4,945,382	4,119,118
Chicoutimi—			
1949	58,386	19,440	38,946
1950	69,816	22,172	47,644
1951	82,416	29,185	53,231
1952	86,450	26,037	60,413
1953	94,202	49,680	44,522
Quebec—			
1949	871,022	813,289	57,733
1950	978,667	818,594	160,073
1951	1,415,577	1,217,085	198,492
1952	1,722,137	2,130,402	−408,265
1953	1,829,632	1,447,599	382,033
Jacques Cartier Bridge (Montreal)			
1949	1,104,921	141,727	963,194
1950	1,231,537	148,385	1,083,152
1951	1,413,381	168,165	1,245,216
1952	1,599,684	197,162	1,402,522
1953	1,734,087	206,563	1,527,524
Three Rivers—			
1949	213,745	45,194	168,551
1950	265,209	64,159	201,050
1951	296,923	37,168	259,755
1952	336,628	63,584	273,044
1953	320,823	83,040	237,783
Port Colborne Elevator—			
1949	485,718	293,881	191,837
1950	588,357	325,954	262,403
1951	630,423	394,843	235,580
1952	860,348	485,315	375,033
1953	1,048,208	565,268	482,940
Prescott Elevator—			
1949	264,004	150,155	113,849
1950	283,680	143,904	139,776
1951	276,544	159,139	117,405
1952	479,079	208,977	270,102
1953	635,565	249,378	386,187
Churchill—			
1949	256,487	339,944	−83,457
1950	368,472	556,659	−188,187
1951	409,141	463,887	−54,746
1952	480,345	532,432	−52,087
1953	621,027	544,747	76,280
Vancouver—			
1949	2,260,677	1,209,250	1,051,427
1950	2,985,966	1,594,580	1,391,386
1951	3,305,429	1,853,730	1,451,699
1952	3,528,272	2,063,370	1,464,902
1953	3,147,259	1,689,025	1,458,234
Second Narrows Bridge (Vancouver)—			
1949	269,012	89,082	179,930
1950	283,319	92,908	190,411
1951	[1]	[1]	[1]

[1] Reverted to former owners in 1951.

Shipping Subsidies.—Table **30** shows the amounts of steamship subventions paid in connection with contracts made under statutory authority for ocean, coastal and inland water-shipping services. The payment of these subventions is administered by the Canadian Maritime Commission.

30.—Steamship Subventions, Years Ended Mar. 31, 1952-54

Services	1952	1953	1954
	$	$	$
Pacific Coast Services—			
Vancouver and northern ports of British Columbia and Queen Charlotte Islands	345,000	345,000	345,000
Victoria and west coast of Vancouver Island	146,555	87,500	17,499
Eastern Services—			
Baddeck and Iona, N.S.	12,000	12,000	14,500
Campobello, N.B., and Lubec, Maine	6,000	6,000	6,600
Cross Point, Que., Campbellton, N.B	—	—	70,000
Dalhousie, N.B., and Miguasha, Que	19,000	19,000	19,000
Deer Island, Campobello Island and St. Stephen, N.B	2,000	—	—
Grand Manan and the mainland, N.B	95,000	95,000	95,000
Halifax, Canso and Guysborough, N.S	20,000	20,000	20,000
Halifax, Sherbrooke, Spry Bay and Torbay, N.S	2,333	—	—
Halifax, Torbay, Ile Madame and ports on west coast of Cape Breton Island, N.S	15,000	15,000	15,000
Ile-aux-Coudres and Les Eboulements, Que	15,000	15,000	15,000
Ile-aux-Grues and Montmagny, Que	2,500	2,500	2,500
Mulgrave and Arichat, N.S	31,000	31,000	31,000

30.—Steamship Subventions, Years Ended Mar. 31, 1952-54—concluded

Services	1952	1953	1954
	$	$	$
Mulgrave and Canso, N.S.	82,000	82,000	82,000
Mulgrave, Guysborough and Queensport, N.S.	16,500	14,422	21,255
Murray Bay and north shore St. Lawrence, Que. (Winter Service).	50,000	50,000	50,000
Owen Sound and ports on Manitoulin Island and Georgian Bay, Ont.	83,231	72,816	69,553
Pelee Island and the mainland, Ont.	43,537	30,000	35,000
Pictou, Mulgrave and Cheticamp, N.S.	13,500	13,500	13,500
Pictou, N.S., Charlottetown, P.E.I., and Magdalen Islands, Que.	120,000	120,000	120,000
Prescott, Ont., and Ogdensburg, N.Y.[1]	—	—	8,782
Prince Edward Island and Nova Scotia	130,000	158,000	158,000
Quebec, Natashquan and Harrington, Que., and other ports on the north shore, Gulf of St. Lawrence	520,000	520,000	520,000
Quebec or Montreal, Gaspe, Que., and Magdalen Islands, calling at way ports	156,500	156,500	156,500
Rimouski, Matane and ports on the north shore of the St. Lawrence, Que	125,500	125,500	125,500
Rivière-du-Loup and St. Simeon, Que	21,000	21,000	21,000
Saint John, N.B., Westport and Yarmouth, N.S., calling at way ports	29,625	29,625	29,625
Sydney and Bay St. Lawrence, Cape Breton Island, calling at way ports	40,000	40,000	40,000
Sydney, Bras d'Or Lake ports, ports on the west coast of Cape Breton Island and Prince Edward Island	30,000	—	—
Sydney and Whycocomagh, Cape Breton Island, calling at way ports	28,000	28,000	28,000
Yarmouth, N.S., and Boston, Mass.	25,541	33,334	36,000
Newfoundland Coastal Steamship Services	1,590,000	1,536,000	1,903,116
Ocean Services—			
Canada, New Zealand and Australia	166,667	166,667	—
Assistance for Canadian Flag Ocean Shipping Industry	337,500	—	—
Totals	**4,320,489**	**3,845,364**	**4,063,930**

[1] The annual subsidy for this Service is $15,000 refundable in whole or in part. Full refund was made in respect of years ended Mar. 31, 1952 and 1953; the amount shown for 1954 is a balance subject to recapture in 1955.

PART V.—CIVIL AIR TRANSPORTATION*

Section 1.—Administration and Development

Historical Developments.—Canada's aviation history dates back to 1909 when the *Silver Dart* piloted by Jack McCurdy (Hon. J. A. D. McCurdy, former Lieutenant-Governor of Nova Scotia) flew at Baddeck, N.S. This was the first aeroplane flight by a British subject in the British Empire.

There was little aviation development in this country until World War I. Following the War, many of Canada's wartime aviators assisted in developing air transportation services into inaccessible areas, air forestry patrols and inter-city air services. During this period, the flying clubs movement received government assistance in the training of pilots and engineers required by Canada's civil aviation industry.

World War II was a period of intensive construction of airports and aerodromes to meet the requirements for training of airmen under the British Commonwealth Air Training Plan. At the end of the War, many Service-trained Canadian airmen turned to commercial flying and were absorbed in existing operating companies or helped to develop other flying services. Transatlantic air services were inaugurated by the Department of Transport during the War and were turned over to Trans-Canada Air Lines which had come into being by Act of Parliament in 1937 to provide for the development of a government-controlled transcontinental air service for regular scheduled operations. Canadian Pacific Air Lines was created by the amalgamation of small commercial operators for the servicing of Canada's northland. In 1949, the Canadian Pacific Air Lines was designated to provide transpacific services on behalf of Canada and began its scheduled operations from Vancouver, B.C., to Australia and New Zealand in July of that year and to Japan, China and Hong Kong in September. Service to Mexico and South America was inaugurated in 1953. Current operations of TCA and CPA are covered on pp. 897-899.

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* Sections 1 and 2 of this Part were revised in the Department of Transport and Section 3, except where otherwise indicated, in the Transportation Section, Public Finance and Transportation Division, Dominion Bureau of Statistics. For military air transportation, *see* Chapter XXVIII on Defence of Canada.

The Control of Civil Aviation.—The control of civil aviation in Canada is under the jurisdiction of the Federal Government and is administered under the authority of the Aeronautics Act, 1919, and amendments thereto. The Aeronautics Act is in three parts. Broadly speaking, Part I deals with the technical side of civil aviation, comprising matters of registration of aircraft, licensing of airmen, the establishment and maintenance of airports and facilities for air navigation, air traffic control, accident investigation and the safe operation of aircraft. This Part of the Act is administered by the Controller of Civil Aviation under the supervision of the Director of Air Services, Department of Transport. Part II of the Act deals with the social and economic aspects of commercial air services and assigns to the Air Transport Board certain statutory functions with respect to the regulation of commercial air services. Part III of the Act deals with matters of government internal administration in connection with the Act.

Weather Services.—Weather services of the Meteorological Division of the Department of Transport have been broadened to meet the demands of aviation for weather information and forecasts at higher levels, over new areas and for extended routes. A Central Analysis Office has been established at Montreal, Que., and an Arctic Forecast Team at Edmonton, Alta. New machine methods are being used in processing weather data, and the network of surface and upper air observing stations has been expanded. Fifty forecast offices were in operation in 1953, linked by teletype, radio teletype and a nationwide facsimile system. Arctic weather stations and a Pacific weather station 1,000 miles to the west of Vancouver, B.C., were maintained under international agreement.

Air Industries and Transport Association.—Commercial flying schools, which are members of the Air Industries and Transport Association, numbered 38 at the end of 1953. During 1953 the number of students instructed and graduated as private pilots was 586, the number graduated as commercial pilots was 179, and the number of instructional hours flown was 44,735.

Royal Canadian Flying Clubs.—At the end of 1953 there were 36 member clubs of the Royal Canadian Flying Clubs Association with a total membership of 7,730. Instructional hours of flying totalled 77,751 in 1953 and 168 aircraft were utilized for instructional purposes. The number of students instructed and graduated as private pilots was 976 and as commercial pilots 159.

International Air Agreements.—The position of Canada in the field of aviation as well as its geographical location makes co-operation with other nations of the world engaged in international civil aviation imperative. Canada took a major part in the original discussions that led to the establishment of the International Civil Aviation Organization, generally known as ICAO, which has its headquarters at Montreal, Que. A special article on "The International Civil Aviation Organization and Canada's Participation Therein" appeared in the 1952-53 Year Book, pp. 820-827.

In recent years, Canada has been a signatory to agreements concerning civil aviation with: Australia and New Zealand; Belgium, Denmark, France, Germany, Ireland, Iceland, The Netherlands, Norway, Portugal, Sweden, South Africa, and the United Kingdom and with the United States.

Section 2.—Air Services

Air Transport Services.—These services are grouped into two broad classes—Scheduled Services and Non-scheduled Services.

Scheduled services provide regular point-to-point service on scheduled advertised routes and Non-scheduled Services include:—

(1) Specific Point Services from a designated base to specific points on the basis of unit rates that may be undertaken as the traffic warrants and that are not on a time schedule;

(2) Chartered Services operated on the basis of the private chartering of an entire aircraft for a specific trip;

(3) Contract Air Services which operate on one or more specific contracts. These do not operate on a time schedule nor need the contractor take the entire space of the aircraft;

(4) Specialty Air Services concerned with large-scale forestry and utility surveys according to some specific agreement.

Trans-Canada Air Lines.—TCA, which began operations in 1938 on a 122-mile route between Vancouver, B.C., and Seattle, Wash., had, by December 1953, grown to a route pattern of 9,916 miles in North America and 9,078 miles overseas.

Though there were no major changes in the route structure in 1953, there were increases in the frequency of flights between many of the cities served by the airline and 11 p.c. more aircraft miles were flown than in 1952. Passenger transportation rose in volume by 16 p.c. over the previous year, air express and air freight by 12 p.c. and airmail by 11 p.c. A sixth daily service was added to the transcontinental route, which involved the extension of *North Star* operations to Regina, Sask., and Lethbridge, Alta., a line previously served by DC-3's. Later, the Lethbridge service was suspended indefinitely because of runway deterioration at that point. On June 14, 1953, a summer service was inaugurated between Toronto and Muskoka as part of TCA's northern Ontario route. It was designed to serve the tourist needs of that resort area and proved highly popular on a seasonal basis. Late in the year, *North Star* service was extended to Cleveland, Ohio.

During the summer months, transatlantic services were increased to eight flights weekly from Montreal: Prestwick, Scotland, was served by four flights; Paris, France, by two; and Shannon, Ireland, and Dusseldorf, Germany, by one each. Additional flights were also operated to accommodate heavy pre-Coronation traffic. A weekly transatlantic flight originating and terminating at Toronto was inaugurated on Nov. 3, 1953, which eliminated time-consuming flight connections at Montreal for air travellers from Western Canada and Ontario. Montreal, however, remains the principal North American gateway for TCA transatlantic flying.

1.—Passenger, Freight and Mail Traffic of Trans-Canada Air Lines, 1944-53

Source: Trans-Canada Air Lines Annual Report.

Year	Revenue Passenger Traffic[1]		Revenue Commodity Traffic[2]		Mail Traffic
	No.	passenger miles	lb.	ton-miles	ton-miles
1944	156,884	84,425,354	1,117,747	510,760	1,760,486
1945	183,121	106,088,111	1,261,935	500,687	1,571,180
1946	305,442	155,777,319	1,453,743	513,493	1,210,716
1947	427,967	179,808,562	2,041,315	764,105	1,275,909
1948	532,555	249,575,544	4,313,297	1,608,102	2,294,088
1949	648,574	310,699,767	5,471,013	2,160,644	3,403,810
1950	790,808	379,605,810	9,518,009	3,585,775	3,644,752
1951	930,691	450,840,623	10,826,333	3,861,583	3,969,371
1952	1,132,518	653,961,415	19,757,969	7,042,427	4,843,052
1953	1,307,810	759,319,800	22,996,531	7,894,109	5,373,841

[1] Includes non-scheduled service. [2] Includes excess baggage and express.

2.—Operating Revenue and Expenditure of Trans-Canada Air Lines, 1944-53

Source: Trans-Canada Air Lines Annual Report.

Year	Passenger	Freight[1]	Mail	Total Operating Revenue[2]	Operating Expenditure[3]	Net Surplus (+) or Deficit (−)[4]
	$	$	$	$	$	$
1944	4,456,768	376,516	3,802,395	9,192,522	8,948,388	+7,409
1945	5,462,940	361,177	4,250,939	10,512,588	10,250,272	+32,772
1946	8,047,124	378,185	3,780,509	12,810,805	13,926,061	−1,269,624
1947	10,450,524	534,359	3,808,197	15,297,347	16,796,492	−1,761,043
1948	14,469,578	888,917	4,648,775	20,866,936	21,624,057	−1,183,022
1949	19,460,395	1,161,612	5,400,000	26,523,969	27,472,728	−1,419,444
1950	24,183,501	1,667,827	5,400,000	31,810,684	31,318,613	+492,071
1951	28,666,505	1,913,703	5,741,000	37,043,289	32,670,654	+4,372,635
1952	42,022,616	3,730,521	7,698,641	55,057,708	52,744,741	+2,312,967
1953	48,242,942	4,111,456	7,786,119	62,236,564	61,433,700	−802,864

[1] Express and excess baggage. [2] Includes other revenue. [3] Interest and exchange charges excluded except for 1946, 1947, 1948 and 1949. [4] Includes interest on capital invested.

Canadian Pacific Air Lines Limited.—CPA operates scheduled domestic services over a total of 10,723 route miles, and overseas services from Vancouver to Australia, New Zealand and the Orient and to Mexico and to South America, totalling 20,676 route miles. Domestic services are concentrated mainly in the western and northern regions of Canada, although two daily services are flown in the Montreal-Quebec-Toronto area. CPA has five pressurized 40-passenger *Convair* air-liners operating on certain domestic routes.

Overseas routes are flown exclusively by DC-6B aircraft designed to accommodate both tourist and first-class passengers. These aircraft are four-engined transports having a normal seating capacity of 64 persons but capable of carrying 82.

Following are traffic statistics for the year 1953:—

Item		*Domestic*	*North Pacific*	*South Pacific*[1]
Revenue miles	No.	5,969,545	1,851,700	964,855
Revenue passengers	No.	213,856	12,597	4,678
Revenue goods	lb.	6,876,503	132,756	12,388
Mail	lb.	2,441,854	78,962	7,280

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[1] Includes Mexico and South America.

Independent Air Lines.—In addition to Trans-Canada Air Lines and Canadian Pacific Air Lines, there are four other domestic air lines licensed to operate scheduled services in Canada. These are:—

Central Northern Airways Limited, Winnipeg, Man.
Maritime Central Airways Limited, Charlottetown, P.E.I.
Queen Charlotte Airlines Limited, Vancouver, B.C.
Quebecair Incorporated, Mont Joli, Que.

Licensed domestic air carriers operating in Canada held valid operating certificates at Dec. 31, 1953, covering 38 scheduled, 88 flying training, and 480 non-scheduled and specialty commercial air services.

Non-scheduled services are operated by the majority of the independent air lines. These services provide effective access to sections of Canada that are inaccessible by other means of transportation, and act as feeders to the scheduled air lines. They also provide specialty services such as recreational flying, aerial photography and survey, aerial pest control and aerial advertising.

Commonwealth and Foreign Scheduled Commercial Air Services.—At the end of December 1953 there were 14 Commonwealth and foreign air carriers holding a total of 18 valid operating certificates covering international scheduled commercial air services operating into Canada, as follows:—

Air France (Compagnie Nationale Air France).—Operating between points in Metropolitan France and Montreal, Que., Canada, direct or via Shannon, Ireland, Keflavik, Iceland, or The Azores and Gander, N'f'ld., Canada; and New York, N.Y., and Chicago, Ill., U.S.A.

American Airlines, Inc.—Operating between Toronto, Ont., Canada, and New York, N.Y./Newark, N.J., U.S.A., direct or via Buffalo, N.Y., U.S.A.

British Commonwealth Pacific Airlines, Ltd.—The Canadian portion of the route between San Francisco, Cal., U.S.A., and Vancouver, B.C., Canada, of the transpacific service between Sydney, N.S.W., Australia, and/or Auckland, New Zealand and Vancouver, B.C., Canada.

British Overseas Airways Corp.—Operating between London, England, and Montreal, Que., Canada, and between London, England, and New York, N.Y., U.S.A., both routes via Prestwick, Scotland, or Shannon, Ireland, and Gander, N'f'ld., Canada; and between London, England, Gander, N'f'ld., Canada, and Bermuda.

Colonial Airlines, Inc.—Operating *(a)* between the terminals Ottawa, Ont., Canada, and Montreal, Que., Canada, and New York, N.Y., U.S.A., via Burlington, Vt., U.S.A., and *(b)* between the terminals, Ottawa, Ont., Canada, and Montreal, Que., Canada, and Washington, D.C., U.S.A., via Massena, N.Y., and/or Syracuse, N.Y., U.S.A.

K.L.M. Royal Dutch Airlines.—The Canadian portion of the route between the terminals Amsterdam, Netherlands, and Montreal, Que., Canada; and the Canadian portion of the route between the terminals Montreal, Que., Canada and Willemstad, Curaçao, Netherlands Antilles.

Northeast Airlines, Inc.—Operating between Montreal, Que., Canada, and Boston, Mass., U.S.A., via Burlington, Vt., Montpelier-Barre, Vt., White River Junction, Vt., (Lebanon Airport, N.H.) and Concord, N.H., U.S.A.

Northwest Airlines, Inc.—Operating between Winnipeg, Man., Canada, and Fargo, N.D., U.S.A., and between Minneapolis/St. Paul, Minn., U.S.A., Edmonton, Alta., Canada, Anchorage, Alaska, U.S.A., and beyond.

Pan American World Airways, Inc.—The Canadian portion of the air route between Seattle, Wash., and Fairbanks, Alaska, and with points of call at Juneau and Annette Island, Alaska, and Whitehorse, Y.T., Canada, between New York, N.Y., Philadelphia, Pa., Boston, Mass., U.S.A., and Gander, N'f'ld., Canada, Shannon, Ireland, London, England, and beyond.

Sabena (*Société Anonyme Belge d'Exploitation de la Navigation Aérienne*).—Operating between Brussels, Belgium, and New York, N.Y., U.S.A., via Shannon, Ireland, and Gander, N'f'ld., Canada.

Scandinavian Airlines System.—Between Stockholm, Sweden; Oslo, Norway; Copenhagen, Denmark; Prestwick, Scotland; Gander, N'f'ld., Canada and New York, N.Y., U.S.A.

T.W.A. (*Trans-World Airlines, Inc.*).—Operating between New York, N.Y., Boston Mass., U.S.A., and Gander, N'f'ld., Canada; The Azores, Shannon, Ireland; London, England; Paris, France; Lisbon, Portugal; and beyond.

United Air Lines, Inc.—Operating between Vancouver, B.C., Canada and Seattle, Wash., via Bellingham, Wash., U.S.A.

Western Air Lines, Inc.—Operating between Great Falls, Mont., U.S.A.; Cut Bank, Mont., U.S.A.; and Lethbridge and Edmonton, Alta., Canada; via Calgary and Penhold, Alta., Canada.

Section 3.—Civil Aviation Statistics

Ground Facilities.—Early ground facilities for civil aviation consisted chiefly of municipal or flying-club airports adjacent to the larger urban centres and of numerous terminals from which commercial flying services operated, mainly into the northern mining regions. These airports formed the nucleus of the chain of airports now operated by the Department of Transport. These airports and aerodromes have been progressively improved and enlarged to meet the requirements of larger and heavier aircraft. Instrument Landing Systems (ILS) designed to facilitate safe landings under low visibility conditions have been installed at 17 airports. Twelve of Canada's civil airports are regular ports of call for international commercial air services.

3.—Aerodromes, by Province, as of September 1954

Note.—An aerodrome is defined by the Air Regulations 1951 as: a defined area on land or water (including any buildings, installations and equipment) intended to be used wholly or in part for the arrival, departure, movement and servicing of aircraft. This table was compiled by the Aeronautical Charting Section, Department of Mines and Technical Surveys, and the aerodromes included are in a usable condition.

Operator	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T.	Yukon	Canada
Landing Areas													
Canadian Pacific Air Lines—													
Land	—	—	—	—	1	—	—	—	1	1	—	2	5
Water	—	—	—	—	—	2	—	—	—	—	—	—	2
Dept. of Northern Affairs and National Resources—													
Land	—	—	—	—	—	—	—	2	2	—	—	2	6
Water	—	—	—	—	—	—	—	1	—	—	—	—	1
Dept. of Transport—													
Land	3	1	4	3	7	35	6	8	7	21	7	—	102
Water	—	—	—	—	—	—	—	—	—	2	—	—	2
Municipal—													
Land	—	—	2	2	8	15	6	9	9	15	—	—	66
Water	—	—	—	—	1	—	—	1	1	5	—	—	8
Provincial—													
Land	—	—	—	—	—	—	—	1	—	1	—	4	6
Water	—	—	—	—	—	13	6	4	—	—	—	1	24
Private—													
Land	—	2	—	2	11	20	2	2	5	8	3	5	60
Water	2	—	2	2	14	68	28	8	7	20	19	3	173
Royal Canadian Air Force—													
Land	1	1	1	2	5	12	7	2	8	5	3	5	52
Water	1	—	—	—	—	2	—	—	—	—	2	1	6
Royal Canadian Navy—													
Land	—	—	1	—	—	—	—	—	—	—	—	—	1
Water	—	—	1	—	—	—	—	—	—	—	—	—	1
Canadian Army—													
Land	—	—	—	—	—	—	—	—	—	3	1	4	8
Water	—	—	—	—	—	—	—	—	—	—	1	—	1
United States Air Force—													
Land	1	—	—	—	—	—	—	—	—	—	—	—	1
Water	1	—	—	—	—	—	—	—	—	—	—	—	1
United States Navy—													
Land	1	—	—	—	—	—	—	—	—	—	—	—	1
Water	1	—	—	—	—	—	—	—	—	—	—	—	1
Totals, Landing Areas	**11**	**4**	**11**	**11**	**47**	**167**	**55**	**38**	**40**	**81**	**36**	**27**	**528**
Land	**6**	**4**	**8**	**9**	**32**	**82**	**21**	**24**	**32**	**54**	**14**	**22**	**308**
Water	**5**	—	**3**	**2**	**15**	**85**	**34**	**14**	**8**	**27**	**22**	**5**	**220**
Auxiliary Facilities													
Hard-surfaced Aerodromes—Land	4	2	8	7	19	42	13	12	14	22	2	2	147
Lighted Aerodromes—													
Land	5	2	4	4	10	33	10	10	21	22	10	5	136
Water	1	—	1	—	—	—	—	—	—	—	—	—	2

Air Traffic Control.—The primary functions of Air Traffic Control are to expedite and maintain an orderly flow of air traffic and to prevent collision between aircraft operating within controlled airspace and between aircraft and obstructions on the movement area of controlled airports. This is accomplished through provision of Airport Control Service and Area Control Service. In addition the following services are provided: (*a*) flight information, (*b*) alerting for search and rescue, (*c*) customs notification and (*d*) aircraft identification.

Airport Control is designed particularly to provide air-traffic control service in the vicinity of major civil airports where the volume and type of aircraft operations, together with weather conditions and other factors, indicate its need in the interest of safety. The service includes the control of pedestrians and vehicles on the manœuvring area of the airport. Control is effected by means of direct radio-telephone communication or visual signals to aircraft and surface vehicles on and in the vicinity of controlled airports. The control towers are located at Patricia Bay and Vancouver, B.C.; Lethbridge, Calgary and Edmonton, Alta.; Saskatoon and Regina, Sask.; Winnipeg, Man.; Windsor, London, Toronto, Toronto Island, Ottawa and North Bay, Ont.; Montreal, Cartierville, Quebec and Seven Islands, Que.; Moncton, N.B.; Sydney, N.S.; and Gander, N'f'ld. Most of these control towers are in continuous operation, but a few provide only 16-hour daily service.

Area Control is designed particularly to provide air-traffic control service to aircraft operating within controlled airspace during weather conditions which prevent a pilot from seeing other aircraft or obstructions and necessitate his reliance on instruments to conduct the flight.

This service is provided by area control centres at Vancouver, B.C.; Edmonton, Alta.; Winnipeg, Man.; Toronto, Ont.; Montreal, Que.; Moncton, N.B.; and Gander, N'f'ld. Each of these centres is connected to the control towers, radio range stations and operations offices within its control area by means of an extensive system of local and longline interphone or radio circuits and through the radio communication facilities available at these offices to all aircraft requiring area control service. Each area control centre is similarly connected with the adjacent centres, including centres in the United States, for the purpose of co-ordinating the control of aircraft operating through more than one control area. This communications system permits each centre to maintain a continuous detailed record of the movements of all aircraft operating in accordance with the Instrument Flight Rules, and a general record of the movements of all aircraft operating in accordance with the Visual Flight Rules within its control area. In addition to providing area control service to aircraft operating within the controlled airspace over Newfoundland, the Gander area control centre provides this service within the airspace over approximately one-half of the North Atlantic Ocean. Area control service is provided for approximately 15,000 miles of airways, air routes and control channels.

Flight Information is designed to provide advice and information useful for the safe and efficient conduct of flight, including weather reports and forecasts, field condition reports, data concerning aids to navigation, traffic information, refuelling and transportation facilities and other related data of assistance to the pilot in planning or conducting a flight. This service is provided by all air-traffic control units but particularly by the seven area control centres—one to a region.

Alerting for Search and Rescue is designed to ensure that the appropriate organizations are notified of aircraft in need of search and rescue aid and otherwise to assist such organizations, as required. Area control centres are responsible for notifying these organizations promptly of non-arrival at destination of any aircraft for which a flight plan or flight notification has been received. This requires the maintenance and constant supervision of a continuous record of active flights to ensure that non-arrival of any aircraft is detected immediately. The service is available to any pilot who files either a flight plan or a flight notification with any communications agency of the Air Services Branch of this Department or directly with one of the area control centres or control towers.

Customs Notification Service is provided to facilitate the routine notification of the appropriate customs agency by pilots who plan to cross the United States-Canada boundary. The Air Traffic Control communications system and units connected therewith forward pilot requests to notify the customs officer at the airport of destination.

Aircraft Identification Service is provided by area control centres to assist the Department of National Defence in establishing the identification of all aircraft operating within specified areas.

Air Traffic Control employs 125 airport controllers, 75 area controllers, 101 air-traffic control assistants and a headquarters staff of six—a total of 307 persons—and operates 21 airport control towers and seven area control centres. The number of controlled operations in Canada during 1953 was 1,544,980, an increase of 17·7 p.c. over the preceding year. Of this total, 74·6 p.c. represented civil and 25·4 p.c. military operations.

Summary of Operation Statistics.—The statistics given in Table 4 show the remarkable increase in recent years in passenger freight and mail traffic.

4.—Summary Statistics of Civil Aviation, 1949-53

NOTE.—Figures from 1921 are given in the corresponding table of previous Year Books beginning with the 1924 edition.

Item	1949	1950	1951	1952	1953
Aircraft Miles Flown—					
Revenue..................No.	35,925,311	39,901,935	46,253,726	52,125,891	57,292,431
Non-revenue.............. "	1,821,675	1,466,559	1,905,996	..	1,700,515
Totals..................No.	37,746,986	41,368,494	48,159,722	52,125,891	58,992,946
Passengers Carried—					
Revenue[1]..................No.	1,211,149	1,452,081	1,788,558	2,154,434	2,652,293
Non-revenue[2].............. "	45,763	48,113	53,154	57,330	65,373
Totals[1]..................No.	1,267,865	1,511,021	1,888,689	2,289,779	2,717,666
Passenger Miles—					
Revenue..................No.	392,507,141	474,367,165	585,701,475	679,136,075[3]	791,185,039
Non-revenue[2].............. "	23,882,322	25,213,468	25,228,048	27,559,456	34,113,939
Totals..................No.	416,389,463	499,580,633	610,929,523	706,695,531	825,298,978
Freight Carried—					
Revenue[4].................. lb.	32,852,373	42,141,292	53,542,103	133,118,754	175,476,670
Non-revenue.............. "	3,232,369	3,443,521	4,129,524	5,237,779	4,814,274
Totals[4].................. lb.	37,097,767	46,681,194	61,693,191	138,416,758	180,290,944
Freight Ton-Miles—					
Revenue..................No.	4,669,861	6,420,693	8,274,995	7,722,018	9,150,409
Non-revenue.............. "	1,645,052	1,658,520	1,900,940	1,915,559	2,084,070
Totals..................No.	6,314,913	8,079,213	10,175,935	9,637,577	11,234,479
Mail carried................. lb.	13,506,220	14,241,523	16,485,558	17,877,593	19,844,871
Mail ton-miles...............No.	4,108,488	4,293,447	4,736,524	4,953,326	5,511,493
Hours Flown by Aircraft—					
Transportation revenue....No.	227,563	246,653	478,523	358,081	386,070
Transportation non-revenue "	14,770	12,409	22,738	20,490	23,954
Patrols, surveys, etc....... "	37,988	48,654	50,475	80,267	83,193
Totals..................No.	280,321	307,716	551,736	458,838	493,217

For footnotes, *see* end of table.

4.—Summary Statistics of Civil Aviation, 1949-53—concluded

Item	1949	1950	1951	1952	1953
Gasoline consumption........gal.	16,987,122	22,088,575	29,596,490	38,323,977	43,519,783
Lubricating oil consumption.. "	227,382	275,370	333,557	456,187	542,732
Licensed civil airports (all types)....................No.	336	279	..	419	433
		Year Ended Mar. 31—			
		1951	1952	1953	1954
Licensed Civil Aircraft (all types)—					
Gross weight—					
Up to 2,000 lb..........No.	1,018	1,169	1,170	1,242	1,331
2,001- 4,000 lb.......... "	414	483	527	567	668
4,001-10,000 lb.......... "	398	446	454	450	488
10,001-20,000 lb.......... "	30	32	31	33	48
Over 20,000 lb.......... "	113	112	119	136	159
Totals, Aircraft.........No.	1,973	2,242	2,301	2,428	2,694
Ownership, Commercial—					
Up to 2,000 lb..........No.	557	593	577	540	550
2,001- 4,000 lb.......... "	264	279	282	279	308
4,001-10,000 lb.......... "	261	300	387	285	314
10,001-20,000 lb.......... "	23	24	25	25	30
Over 20,000 lb.......... "	102	101	113	121	149
Ownership, Other—					
Up to 2,000 lb..........No.	461	576	593	702	783
2,001- 4,000 lb.......... "	150	204	245	288	350
4,001-10,000 lb.......... "	137	146	67	165	181
10,001-20,000 lb.......... "	7	8	6	8	19
Over 20,000 lb.......... "	11	11	6	15	10
	Year Ended Mar. 31, 1950				
Licensed Civil Air Personnel—					
Commercial pilots[5]........No.	56	44	38	20	—
Commercial pilots[6]........ "	—	484	807	1,199	1,532
Senior commercial......... "	—	157	165	218	337
Airline transport.......... "	—	87	165	458	589
Glider pilots.............. "	—	33	77	107	136
Limited commercial pilots. "	653	—	—	—	—
Transport pilots........... "	775	651	612	269	—
Private pilots............. "	2,603	3,546	4,444	4,483	4,508
Air navigators............. "	—	—	28	43	53
Air traffic controllers...... "	—	—	172	183	199
Air engineers.............. "	1,623	1,546	1,402	169	—
Aircraft maintenance engineers[7]................ "	—	—	—	1,249	1,429

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[1] Exclusive of passengers carried between foreign stations who are included in totals. [2] Includes employees other than crews. [3] Exclusive of charter services, figures for which are not available. [4] Exclusive of freight carried between stations which is included in totals. [5] Old type licence. [6] New type licence. [7] New type of licence for air engineers.

Table 5 shows civil aviation figures for 1953 by type of service. A definition of scheduled and non-scheduled carriers is given on p. 897. Statistics for international carriers include traffic over Canadian territory for both Canadian and foreign operators; a small traffic across Canadian territory and between foreign stations is also included. Statistics for Canadian carriers operating international routes are included both as "international" and "Canadian" but duplications are excluded from the totals.

5.—Summary Statistics of Civil Aviation, by Type of Service, 1953

Item		Canadian Carriers		Foreign International	Total
		Scheduled	Non-scheduled and Other		
Aircraft Miles Flown—					
Revenue transportation	No.	37,681,341	17,325,628	2,285,462	57,292,431
Non-revenue transportation	"	1,669,424	—	31,091	1,700,515
Totals	No.	39,350,765	17,325,628	2,316,553	58,992,946
Passengers Carried—					
Revenue	No.	1,789,814	349,784	512,695	2,652,293
Between foreign stations	"	99,662	—	—	99,662
Non-revenue	"	50,850	4,524	9,999	65,373
Totals	No.	1,940,326	354,308	522,694	2,817,328
Passenger Miles—[1]					
Revenue	No.	740,614,222	3,899,635	46,671,182	791,185,039
Non-revenue	"	32,107,118	23,819	1,983,002	34,113,939
Totals	No.	772,721,340	3,923,454	48,654,184	825,298,978
Freight Carried—					
Revenue	lb.	44,754,513	121,627,843	9,094,314	175,476,670
Between foreign stations	"	124,794	—	—	124,794
Non-revenue	"	3,898,264	199,438	716,572	4,814,274
Totals	lb.	48,777,571	121,827,281	9,810,886	180,415,738
Freight Ton-Miles—[1]					
Revenue	No.	7,947,933	192,769	1,009,707	9,150,409
Non-revenue	"	1,927,399	6,933	149,738	2,084,070
Totals	No.	9,875,332	199,702	1,159,445	11,234,479
Mail carried	lb.	15,776,157	834,244	3,234,470	19,844,871
Mail ton-miles	No.	5,324,811	75,056	111,626	5,511,493
Hours Flown by Aircraft—					
Transportation revenue	No.	219,738	155,190	11,142	386,070
Transportation non-revenue	"	11,166	12,680	108	23,954
Patrols, surveys, etc	"	562	82,631	—	83,193
Totals	No.	231,466	250,501	11,250	493,217
Gasoline consumption	gal.	29,911,190	6,608,675	6,999,918	43,519,783
Lubricating oil consumption	"	373,402	112,525	56,805	542,732

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[1] Exclusive of charter service, figures for which are not available.

6.—Capital Investment of the Department of Transport in Air Services, as at Mar. 31, 1951-53

NOTE.—Compiled from Department of Transport records.

Item	1951	1952	1953	Total as at Mar. 31, 1953
	$	$	$	$
Airways and Airports—				
Civil Aviation—				
Ordinary appropriations	—	—	—	849,053
Capital appropriations	6,114,094	4,547,948	6,800,041	48,972,727
War appropriations—				
Transferred from other government departments	233,011	Cr. 705,977	21,008,338	201,770,723
Value of properties transferred to Crown Assets Disposal Corporation	Cr. 58,644,833	Cr. 14,342,687	Cr. 4,423,532	
Property retired through obsolescence, loss or abandonment	Cr. 367,675	—	Cr. 395,620	
Northwest Communication System transferred to Telecommunications Division	—	Cr. 12,423,493	—	
Air Ministry of United Kingdom	—	—	—	4,913,091
Telecommunications Division—				
Aviation Radio Aids—				
Ordinary appropriations	—	—	—	336,180
Capital appropriations	1,303,894	3,077,489	1,652,616	16,869,918
War appropriations	—	12,423,493	—	18,069,453
Totals, Airways and Airports	**Cr. 51,361,509**	**Cr. 7,423,227**	**24,641,843**	**291,781,145**
Telecommunications Division (excluding Aviation Radio Aids)—				
Radio Act and Regulations	64,368	48,160	159,469	293,577
Radio Aids to Marine Navigation—				
Ordinary appropriations	207,688	164,645	210,433	961,842
War appropriations	—	—	—	797,281
Suppression of radio interferences	12,302	20,219	25,690	86,331
Totals, Other Radio Facilities	**284,358**	**233,024**	**395,592**	**2,139,031**
Meteorological Division—				
Ordinary appropriations	390,219	353,985	683,733	2,248,036
War appropriations	—	—	—	492,099
Totals, Meteorological Division	**390,219**	**353,985**	**683,733**	**2,740,135**
Canadian Government Transatlantic Air Service	—	—	—	**4,788,369**
Grand Totals	**Cr. 50,686,932**	**Cr. 6,836,218**	**25,721,168**	**301,448,680**

7.—Expenditure and Revenue of the Department of Transport in connection with Air Services, Years Ended Mar. 31, 1951-53

NOTE.—Compiled from Department of Transport Records.

Expenditure	1951	1952	1953
	$	$	$
Expenditure			
Air Transport Board	216,293	230,116	363,806
Air Services Administration	218,166	203,876	217,261
Civil Aviation Division (including Aviation Radio Aids)—			
Control of Civil Aviation	672,540	735,619	836,935
Construction Services—administration	712,994	676,318	706,226
Grants to aeroplane clubs	252,177	266,850	271,650
Grants to National Research Council	50,000	50,000	50,000

7.—Expenditure and Revenue of the Department of Transport in connection with Air Services, Years Ended Mar. 31, 1951-53—continued

Expenditure, Revenue and Receipts	1951	1952	1953
	$	$	$
Expenditure—concluded			
Civil Aviation Division—concluded			
Airways and Airports, Operation and Maintenance—			
Ordinary	7,914,467	8,730,267	9,299,286
Aviation radio aids	4,064,678	4,628,160	4,781,125
Contributions to assist municipalities	196,027	108,319	97,275
Contribution to State of Michigan	24,849	30,420	32,010
Contribution to International Civil Aviation Organization *re* Iceland Government air-aids to navigation	22,333	40,636	33,943
Contribution to Denmark in joint support of North Atlantic Air Navigation facilities in the Faroes and Greenland	70,172	75,153	59,082
Contribution to South Pacific Air Transport Council	224,500	112,500	122,500
Investigation of the "Canadian Pilgrims" aircraft accident	3,469	—	—
Airways and Airports Traffic Control	1,054,674	1,178,631	1,314,625
Northwest Communication System—ordinary	39,703	109,820	—
Refund of land rentals to Trans-Canada Airlines	—	3,300	—
Contribution *re* landing strip, Goldfields, Sask.	—	80,000	—
Totals, Civil Aviation Division	15,302,583	16,825,993	17,604,657
Telecommunications Division (excluding Aviation Radio Aids)—			
Administration of Radio Act and Regulations—Ordinary	802,727	828,008	908,699
Radio Aids to Marine Navigation—Ordinary	1,546,860	1,788,846	2,018,885
Suppression of radio interferences	323,997	368,697	375,419
Issue of radio receiving licences	675,780	699,857	702,779
Telegraph and Telephone Services—			
Administration, operation and maintenance	1,216,860	1,294,759	1,387,102
Construction and improvements	226,939	303,777	459,396
Totals, Telecommunications Division (excluding Aviation Radio Aids)	4,793,163	5,283,944	5,852,280
Meteorological Division—			
Operation and maintenance	5,126,975	5,760,842	6,195,462
Totals, Expenditure	**25,657,180**	**28,304,771**	**30,233,466**
Revenue and Receipts			
Air Services Administration	—	—	692
Civil Aviation Division (including Aviation Radio Aids)—			
Private air pilots' certificates	3,995	4,839	5,625
Aircraft registration fees	3,586	4,263	4,918
Airport licences	580	430	305
Airworthiness certificates	815	1,060	1,415
Fines—Aeronautics Act and Regulations	793	560	1,585
Aircraft landing fees	1,791,191	1,603,538	1,896,437
Rentals at airports	621,088	476,249	456,896
Outside and hangar space rental	364,472	319,671	407,165
Rental of equipment	11,927	9,188	9,650
Rentals—employees quarters	128,568	262,147	238,704
Miscellaneous rentals	48,532	25,582	59,976
Power service	72,163	67,726	57,177
Concessions—			
Gasoline and oil	361,088	344,333	421,612
Taxi	21,743	24,789	29,443
Telephone	4,162	4,756	5,711
Restaurants and snack bars	19,684	19,500	33,880
Other	14,355	36,797	50,920
Telephone service	23,939	22,250	18,028
Airport radio service to aircraft	229,564	302,276	314,859
Radio message tolls	35,960	41,260	27,263
Mess receipts	29,262	24,241	23,037
Sales miscellaneous	5,890	5,811	7,377
Aircraft servicing other than repairs	7,362	1,216	21
Observation roof—turnstiles	17,952	15,244	17,477
Miscellaneous revenue	47,540	53,526	43,913

7.—Expenditure and Revenue of the Department of Transport in connection with Air Services, Years Ended Mar. 31, 1951-53—concluded

Revenue and Receipts	1951	1952	1953
	$	$	$
Revenue and Receipts—concluded			
Civil Aviation Division—concluded			
Gander Airport—			
Mess hall accommodation	5,388	5,454	4,253
Airlines hotel accommodation	33,799	29,326	28,749
Skyways Club	81,629	98,953	97,918
Terminal charges	298,606	135,855	10,142
Novelty shop	12,362	—	—
Coal sales	27,832	27,287	29,085
Mess hall board	58,915	8,477	3,638
Airlines hotel dining-room	121,893	75,158	57,608
Airlines hotel bar	49,305	45,454	56,348
Skyways Club snack bar	290,222	267,693	368,785
Skyways Club bar	114,006	140,713	159,791
Laundry	34,018	34,374	27,735
Dry-cleaning plant	15,657	16,141	15,941
Recoverable services	57,508	46,489	54,120
Heating	112,021	122,998	135,213
Electricity	101,803	95,873	87,596
Bakery	49,945	58,199	64,579
Sanitary fees	7,774	5,685	7,622
Bus operation	5,313	2,165	2,422
Sundries	111	5	—
Assessment collections	—	—	1,378
Refunds, previous year's expenditure	113,273	84,949	30,298
Totals, Civil Aviation Division	5,457,591	4,972,500	5,376,615
Telecommunications Division (excluding Aviation Radio Aids)—			
Radio operators' examination fees	990	1,170	1,385
Radio Station Licences—			
Aircraft station	8,755	10,143	12,004
Amateur experimental station	16,856	17,269	17,623
Commercial receiving station	239	382	166
Experimental station	760	855	1,040
Limited coast station	750	800	800
Municipal police private commercial station	413	210	249
Private commercial station	32,958	45,721	56,198
Public commercial station	6,790	7,680	8,580
Ship station	26,774	32,291	33,649
Technical and training school station	32	27	50
Sale of transport publications	357	1,293	1,448
Fines—Radio Act and Regulations	37,839	37,056	34,295
Radio Message Tolls—			
Department of Transport operated coast stations	100,475	111,867	121,950
Marconi operated coast stations	65,477	69,228	77,938
Rentals—living quarters—employees	22,345	25,449	22,446
Other	1,860	4,541	4,296
Government telegraph and telephone tolls	610,601	693,790	970,883
Mess receipts	1,816	736	488
Sundries	623	912	1,654
Refunds, previous year's expenditure	63,836	5,738	108,394
Totals, Telecommunications Division	1,000,546	1,067,158	1,475,536
Meteorological Division—			
Rentals—living quarters—employees	36,849	16,396	18,759
Other	87	254	2,993
Sale of transport publications	1,574	975	3,323
Radio commercial message tolls—Department of Transport operated coast stations	1,530	911	1,335
Air-ground radio service	880	280	—
Communication facilities—inter-office	603	393	356
Power service	—	994	—
Sundries	6	2,104	4,180
Refunds, previous year's expenditure	8,454	10,017	10,341
Totals, Meteorological Division	49,983	32,324	41,287
Totals, Revenue and Receipts	**6,508,120**	**6,071,982**	**6,894,130**

No statistics are available regarding total expenditure on flying operations by the Federal and Provincial Governments or by private individuals, but capital expenditure made by commercial air carriers for property as reported for the end of 1952 and 1953 is shown in Table 8.

8.—Cost of Property, Revenue and Expenditure for Scheduled and Other Commercial Air Carriers, 1952 and 1953

Item	1952			1953		
	Scheduled[1]	Other	Total	Scheduled[1]	Other	Total
	$	$	$	$	$	$
Property Account—						
Aircraft	11,835,273	2,155,297	13,990,570	13,583,865	2,614,601	16,198,466
Aircraft engines	2,537,590	527,498	3,065,088	4,155,326	698,585	4,853,911
Buildings and improvements	2,726,366	451,799	3,178,165	5,564,154	569,814	6,133,968
Miscellaneous	3,057,654	469,674	3,527,328	3,422,362	608,251	4,030,613
Totals, Cost of Property	**20,156,883**	**3,604,268**	**23,761,151**	**26,725,707**	**4,491,251**	**31,216,958**
Revenue and Expenditure—						
Revenue	75,115,634	15,403,661	90,519,295	84,197,975	20,057,525	104,255,500
Expenditure	71,761,685	14,993,662	86,755,347	83,292,744	19,667,156	102,959,900

[1] Includes Canadian trans-border, transatlantic and transpacific services.

Employees and Salaries and Wages.—The numbers of civil air personnel licensed in recent years are shown in Table 4, p. 904. However, the figures in Table 9 include pilots and engineers in the employ of the Federal Government and of private individuals as well as those not employed at all in the ordinary sense.

9.—Employees and Salaries and Wages in Civil Aviation, 1952 and 1953

Year and Class of Employee	Scheduled		Non-scheduled		Totals	
	Employees	Salaries and Wages	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$	No.	$
1952						
General officers	419	2,780,813	93	478,789	512	3,259,602
Clerks	1,100	2,836,149	99	226,604	1,199	3,062,753
Pilots	328	3,352,894	375	1,649,926	703	5,002,820
Co-pilots	352	1,727,598	36	107,485	388	1,835,083
Despatchers	96	473,518	23	66,531	119	540,049
Communication operators	630	1,815,181	39	122,702	669	1,937,883
Stewards or other attendants	401	1,246,990	4	9,433	405	1,256,423
Air engineers	356	1,543,888	184	707,845	540	2,251,733
Mechanics	1,921	7,261,288	201	502,527	2,122	7,763,815
Airport employees	1,281	4,027,586	107	223,708	1,388	4,251,294
Stores employees	245	736,116	24	55,018	269	791,134
Other employees	951	3,256,579	133	194,841	1,084	3,451,420
Totals, 1952[1]	**8,080**	**31,058,600**	**1,318**	**4,345,409**	**9,398**	**35,404,009**

[1] For footnote, *see* end of table, p. 910.

9.—Employees and Salaries and Wages in Civil Aviation, 1952 and 1953—concluded

Year and Class of Employee	Scheduled		Non-scheduled		Totals	
	Employees	Salaries and Wages	Employees	Salaries and Wages	Employees	Salaries and Wages
	No.	$	No.	$	No.	$
1953						
General officers	565	3,586,722	111	660,807	676	4,247,529
Clerks	1,215	3,217,482	126	314,892	1,341	3,532,374
Pilots	349	3,746,059	373	1,853,165	722	5,599,224
Co-pilots	380	1,954,277	102	507,272	482	2,461,549
Despatchers	97	488,102	40	121,370	137	609,472
Communication operators	775	2,236,082	33	100,154	808	2,336,236
Stewards or other attendants	451	1,466,527	11	42,339	462	1,508,866
Air engineers	430	1,975,870	182	751,489	612	2,727,359
Mechanics	2,061	8,149,979	284	848,925	2,345	8,998,904
Airport employees	1,366	4,456,943	105	266,314	1,471	4,723,257
Stores employees	250	796,291	30	79,111	280	875,402
Other employees	1,181	4,169,499	186	398,793	1,367	4,568,292
Totals, 1953[2]	**9,120**	**36,243,833**	**1,583**	**5,944,631**	**10,703**	**42,188,464**

[1] Excludes 348 employees of foreign carriers domiciled in Canada.

[2] Excludes 402 employees of foreign carriers domiciled in Canada.

PART VI.—OIL AND GAS PIPELINES

A special article covering the history and development of pipeline construction in Canada appears in the 1954 Canada Year Book, pp. 861-869. The information contained therein is brought up to the end of 1953 in the following Section.

Section 1.—Pipeline Construction, 1953*

The Trans Mountain pipeline (Edmonton, Alta., to Vancouver, B.C.), construction on which was started in 1952, was completed in October 1953 at a total cost of $93,000,000. The line is 24 inches in diameter and 718 miles in length and has three pumping stations. Though its capacity is 120,000 bbl. of oil a day, market competition on the Pacific Coast was such that the through-put for 1953 did not exceed 35,000 bbl. This flow will increase as refineries are enlarged and new ones are built in the Vancouver district and in adjoining areas of the United States.

A further extension to the Interprovincial pipeline, built in 1950 from Edmonton, Alta., to Superior, Wis., at the head of the Great Lakes, was constructed in 1953 (by the Lakehead Pipeline Company) at a cost of $72,000,000. The extension from Superior follows a route south of the Great Lakes and across Mackinac Straits at the head of Lake Michigan. It is 643 miles long and 30 inches in diameter and will ultimately have a capacity of 300,000 bbl. of oil a day. Oil from Edmonton may now be transported over this line to Sarnia, a distance of 1,765 miles, at a cost of 64 cents a barrel. In order to utilize the present capacity of the extension, it was necessary to increase the capacity of the line to Superior by the construction (by the Interprovincial Pipe Line Company) of a 135-mile loop of 24-inch line from Regina, Sask., to Gretna, Man. There is now storage capacity at Edmonton for 1,000,000 bbl. of crude oil and an outlet through the Interprovincial pipeline for 200,000 bbl. a day.

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* Prepared by Dr. G. S. Hume, Director General of Scientific Services, Department of Mines and Technical Surveys, Ottawa.

In addition to construction on these trunk pipelines, the system of oil-gathering lines was extended. The capacity of Texaco Exploration Company's pipeline to Edmonton from the fields on the Bonnie Glen-Pigeon Lake trend was increased to 47,000 bbl. a day, and the Imperial Pipe Line Company line from Leduc was increased to 96,000 bbl. a day. Other construction included small lines to serve the Cessford field in Alberta; the Cantuar, Fosterton and Success fields in Saskatchewan; and a 12-mile line to tie in the Daly field to the Interprovincial line at Cromer, Man.

In Eastern Canada, the capacity of the Portland (Maine) to Montreal oil pipeline was expanded from 158,000 to 190,000 bbl. a day. The pipeline is 236 miles long, of which 70 miles are in Canada. It consists of parallel lines 12 and 18 inches in diameter. A 200-mile, 8-inch products line was constructed by Sun-Canadian Pipe Line Company from Sarnia to Toronto. Initially the line carried 17,500 bbl. a day but ultimate capacity is double that amount. This line is in addition to that of Imperial Oil Limited from Sarnia to Toronto, the capacity of which is to be increased from 39,000 to 55,000 bbl. a day. The capacity of Trans Northern Pipe Line Company's 397-mile, 10-inch line from Montreal to Toronto, with a spur to Ottawa, was increased to 54,000 bbl. a day by additional compression.

At the end of 1953, there were approximately 3,700 miles of crude-oil trunk lines, gathering lines and oil-products lines in Canada, exclusive of loops. In addition there were 960 miles of lines in the United States, between Gretna, Man., and Sarnia, Ont., carrying Canadian crude oil.

Plans are under way for the building of extensive gas lines in Canada in the next few years but construction so far has been confined to local areas. The town of Grande Prairie in the Peace River area of Alberta is being supplied with gas from the Rycroft field by a pipeline about 40 miles in length. In Saskatchewan, the city of Saskatoon is being supplied with gas from the Brock field near Kindersley by a pipeline 102 miles long. In 1953, more than 4,000 domestic services were installed.

An interesting development that will ultimately affect the building of pipelines in Canada was the construction in the United States of a plastic, oil pipeline from a field in the Williston basin of Montana to a rail point 10 miles distant. The plastic used was cellulose acetate butyrate: a 20-foot length of pipe weighs only 13 lb. compared with 153 lb. for steel of the same length and diameter. The pipeline was laid in five days.

Section 2.—Oil Pipeline Statistics*

There were 17 oil pipelines operating in Canada at Dec. 31, 1953, nine of which were directly linked with the Interprovincial Pipe Line Company's system. The British American Alberta Pipe Line Limited, Canadian Gulf, Edmonton, and Imperial Pipe Line Companies and the Texaco Exploration Company all deliver crude oil to Interprovincial, either at Redwater, Alta., or at the Edmonton terminal. The British American Saskatchewan Pipe Line Limited and Saskatoon Pipe Line Company link the Interprovincial system to Moose Jaw and Saskatoon, respectively; Anglo-Canadian Oils Limited and the Winnipeg Pipe Line Company are offshoots which supply crude oil to Brandon and Winnipeg, Man. The Trans Mountain pipeline—718 miles in length from Edmonton to Vancouver—delivers western Canadian crude oil to British Columbia refineries and in future will serve other refineries in the Pacific northwest. The Valley Pipe Line Company transports crude oil and natural gasoline from Turner Valley to refineries at Hartell and Calgary, Alta. The Amurex Oil Development Company, which commenced operations in July, operates a short gathering system from the South Cessford field in Alberta to rail terminal at Cessford. Oil from Venezuela, Arabia and other countries reaches Montreal refineries from Portland, Me., U.S.A., through the lines of the Montreal Pipe Line Company. The Trans Northern Pipe Line Company, which links refineries at Montreal, Que., and Clarkson, Ont., with numerous consuming centres including Ottawa, Belleville, Kingston, Toronto and Hamilton, carries a large variety of petroleum products. The Products Pipe Line Division of Imperial Oil at Sarnia supplies London, Hamilton, and Toronto, Ont., with products of Sarnia refineries. The Sun Pipe Line Company carries crude and refined oils from the United States to that Company's distributing centre at Sarnia, Ont. The Sarnia refineries are also supplied with considerable quantities of United States crude oil by the Buckeye Pipe Line Company. In October 1953, the Sun-Canadian Pipe Line Company Limited opened a new line to carry refinery products from Sarnia to Toronto, Ont.

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* Statistics of oil pipelines are given in greater detail in the DBS monthly report, *Pipe Lines (Oil) Statistics.*

Pipeline deliveries shown in Tables **1**, **2** and **3** come to non-pipeline carriers, foreign pipelines and terminals including refineries and distributing centres. Comparative statistics for years before 1950 are not available but deliveries were relatively small as the system of the Interprovincial Pipe Line Company did not go into operation until the latter part of 1950. Net gathering-system deliveries in Alberta fell sharply after the opening of the Interprovincial system because the new trunk line carried most of the oil formerly moved eastward in railway tank cars. Starting January 1953, the Imperial Pipe Line Company have reported their operations in Alberta as a gathering system only and for this reason Alberta gathering and trunk deliveries for 1953 are not strictly comparable with those for previous years.

1.—Oil Delivered by Pipeline, by Province in which Shipments Terminated or were Transferred to Other Carriers, 1950-53

Province	1950	1951	1952	1953
	bbl.	bbl.	bbl.	bbl.
British Columbia—Trunk	—	—	—	1,540,011
Alberta[1]—Gathering	10,481,002	2,802,125	2,004,346	10,885,727[2]
Trunk	10,040,785	11,105,921	14,049,411	6,099,022[2]
Saskatchewan—Trunk	2,089,487	9,782,698	11,164,892	14,189,654
Manitoba[3]—Trunk	1,100,602	19,088,726	27,630,314	36,682,639
Ontario[4]—Trunk	—	—	3,093,944	24,868,257
Quebec—Trunk	26,991,972	45,645,037	49,852,761	53,038,461
Net Delivered—Trunk	**40,222,846**	**85,622,382**	**105,791,322**	**136,418,044**
Totals	**50,704,848**	**88,424,507**	**107,795,668**	**147,303,771**

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[1] Includes natural gasoline. [2] *See* text above table. [3] Including deliveries to U.S. pipelines at Gretna, Man., amounting to 949,470 bbl. in 1950, 14,525,755 bbl. in 1951, 21,520,764 bbl. in 1952 and 30,524,131 bbl. in 1953. [4] Products of refineries.

2.—Oil Delivered by Pipeline, by Month in which Shipments Terminated or were Transferred to Other Carriers, 1952 and 1953

Month	1952		1953[1]	
	Gathering	Trunk	Gathering	Trunk
	bbl.	bbl.	bbl.	bbl.
January	127,279	6,937,411	1,190,776	9,534,525
February	150,898	6,483,721	858,453	9,313,189
March	125,607	6,676,710	842,419	10,062,887
April	113,643	6,982,455	420,458	10,909,350
May	120,162	9,408,182	722,037	11,636,997
June	113,800	9,036,456	978,593	11,985,569
July	134,116	9,952,143	1,018,764	12,560,753
August	120,376	10,081,605	1,007,835	12,002,197
September	173,080	9,322,098	1,190,159	10,825,738
October	280,672	10,567,070	983,644	11,941,465
November	244,838	9,794,425	801,030	12,117,381
December	299,875	10,549,046	871,559	13,527,993
Totals	**2,004,346**	**105,791,322**	**10,885,727**	**136,418,044**
Grand Totals	**107,795,668**		**147,303,771**	

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[1] Operations of the Imperial Oil Company in Alberta, formerly reported as trunk deliveries, were reported as gathering deliveries as from January 1953; thus, figures given in this table for 1953 are not strictly comparable with those for 1952.

Employee and revenue data shown in Table **3** do not include statistics for two pipelines, Anglo Canadian Oils Limited and the Sarnia Products Pipe Line Division of Imperial Oil Limited, which are operated as departments of the oil companies and manned by employees who are on the regular payroll of those companies.

3.—Operating Statistics of Oil Pipelines, 1952 and 1953

Item		1952	1953
Barrels handled—Gross daily average—			
Gathering	No.	134,838	160,123
Trunk	"	358,250	453,077
Barrel miles (trunk lines)	'000,000	31,978	47,381
Average miles per barrel (trunk lines)	No.	243·9	286·6
Average employees	"	697	951
Salaries and wages	$	2,933,064	4,188,498
Man hours worked by wage-earners (including overtime)	No.	498,095	586,268
Operating revenues	$	21,271,008	28,305,431

CHAPTER XX.—COMMUNICATIONS

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—GOVERNMENT CONTROL OVER AGENCIES OF COMMUNICATION*

The development and control of radio-communication in Canada from the beginning of the century is outlined in the 1945 Year Book, pp. 644-647.

The present phase of national radio broadcasting in Canada was entered upon in 1936 when, with the passage of the Canadian Broadcasting Act, the Canadian Broadcasting Corporation replaced the Canadian Radio Broadcasting Commission (*see* p. 931). The Act gave the Corporation wide powers in the operation of the system and gave to the Minister of Transport the technical control of all broadcasting stations and the authority to make regulations for the control of any equipment liable to cause interference with radio reception.

Except those matters covered by the Canadian Broadcasting Act, radio-communications are now regulated under the Radio Act and Regulations. In addition, all radio-communication matters are administered in accordance with the provisions of the International Telecommunication Convention and Radio Regulations annexed thereto, as well as such regional agreements as the Inter-American Telecommunications Convention and Inter-American Agreement, and the North American Regional Broadcasting Agreement.

By Order in Council, dated June 8, 1948, responsibility for telegraph and telephone services formerly operated by the Federal Department of Public Works was transferred to the Minister of Transport. The general object of these services is to furnish wire communications for outlying and sparsely settled districts where commercial companies do not enter into the field and where the population must receive adequate communication services in the public interest.

A Crown company, Canadian Overseas Telecommunications Corporation was created by Act of Parliament (Dec. 10, 1949) to acquire for public operation all external telecommunication assets in Canada, in keeping with the Commonwealth

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* Revised under the direction of G. C. W. Browne, Controller, Telecommunications Division, Department of Transport, Ottawa.

Telegraph Agreement signed May 11, 1948. This Agreement was designed to bring about the consolidation and strengthening of the radio and cable communication systems of the Commonwealth.

Land-line telegraph and telephone tariffs and tolls charged by companies incorporated by the Federal Government are regulated by the Board of Transport Commissioners under the provisions of the Railway Act.

Tariffs and tolls charged to the public by individuals or companies for radio telephone or telegraph communications within Canada are likewise regulated by the Board of Transport Commissioners under the provisions of the Railway Act and the Regulations made under the Radio Act.

PART II.—WIRE COMMUNICATIONS*

Section 1.—Telegraphs

The early history of telegraphic communication in Canada is given in the 1934-35 Year Book, p. 778.

Federal Government Telegraph and Telephone Service.†—The function of the Telegraph and Telephone Section of the Department of Transport is to furnish wire communications for outlying and sparsely settled districts where commercial companies do not enter into the field and where the population must receive adequate communication services in the public interest. These services include: telegraph and telephone services to scattered settlements along the coast of Cape Breton Island; cable services to Campobello, Grand Manan and other islands in the Bay of Fundy, to Prince Edward Island and to a number of small islands in the Gulf of St. Lawrence; cable connections with Manitoulin Island in Ontario as well as telephone lines thereon; certain lines to outlying districts in northern Saskatchewan; telegraph lines from Edmonton to the Athabasca and Peace River country in Alberta in addition to an extensive telephone system in the latter area; telegraph and telephone communications around the coast of Vancouver Island, B.C., and adjacent islands; service to fishing, lumbering and mining centres in the interior; and an overland telegraph and telephone line serving communities from Ashcroft, B.C., to Dawson, Yukon Territory.

As at Mar. 31, 1954, the Telegraph and Telephone Service comprised 6,995 miles of pole line, 24,580 miles of wire, 224·5 nautical miles of submarine cable, 50 radio stations and 399 offices. The number of messages handled during the year was 1,497,903, producing a gross revenue of $1,442,792 and a net revenue of $1,009,483.

Telegraph Systems.—The Canadian telegraph systems are composed of lines owned by the Federal Government and by chartered railway and telegraph companies. The Canadian facilities, in proportion to population, are among the most extensive in the world and are operated under great climatic and geographical difficulties.

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* Except where otherwise noted, this Part has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics. The Division issues annual reports dealing with telegraph and telephone statistics.

† Revised by G. C. W. Browne, Controller of Telecommunications, Telecommunications Division, Department of Transport, Ottawa.

1.—Summary Statistics of Canadian Telegraphs, 1944-53

NOTE.—Figures from 1920 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Gross Revenue	Operating Expenses	Net Operating Revenue	Pole-Line Milage	Wire Milage	Employees[1]	Offices	Messages, Land[2]	Cablegrams and Marconigrams[3]	Money Transferred
	$	$	$	miles	miles	No.	No.	No.	No.	$
1944...	16,986,491	14,404,835	2,581,656	52,414	387,677	8,050	4,834	16,445,450	2,324,863	8,242,926
1945...	18,016,289	15,062,231	2,954,058	52,447	391,476	8,230	4,804	17,666,904	2,192,173	8,006,128
1946...	17,997,726	16,028,900	1,968,826	52,523	400,981	8,603	4,707	18,441,841	1,845,539	9,247,100
1947...	18,514,525	17,359,796	1,154,729	51,024	401,803	8,711	4,640	18,987,774	1,613,621	10,988,591
1948...	19,422,788	20,292,402	Dr.869,614	50,958	405,640	9,093	4,679	19,013,468	1,579,679	11,512,194
1949...	22,256,557	22,062,943	193,614	52,535	413,759	9,555	5,288	20,063,078	1,642,278	12,469,348
1950...	23,922,225	22,545,625	1,376,600	51,999	414,943	9,757	5,277	20,477,775	1,687,721	12,733,989
1951...	29,128,473	27,807,547	1,320,926	53,580	435,348	10,611	5,233	21,815,837	1,785,836	16,955,699
1952...	33,093,843	31,617,156	1,476,687	52,699	437,581	11,272	5,256	21,614,196	1,934,433	19,514,490
1953...	36,920,384	33,953,196	2,967,188	52,727	450,835	11,618	5,307	21,222,706	2,042,921	21,553,387

[1] Excludes commission operators. [2] Includes messages to and from vessels on the Great Lakes and the St. Lawrence River and messages to and from stations. [3] Excludes messages relayed and includes paid wireless messages to and from ships in the Gulf of St. Lawrence and on the Atlantic Ocean.

Submarine Cables.—Four cable companies operate submarine cables landing in Canada: Cable and Wireless Limited; the Commercial Cable Company; the Western Union Telegraph Company; and the French Telegraph Cable Company. These companies operate to stations in the United Kingdom, Ireland, the United States, Bermuda, Australia, New Zealand, and St. Pierre and Miquelon Islands. The number of cables operating between connected stations and the length of cables are given in the following table.

2.—Cable Landings in Canada, 1953

Company and Station	Cables	Nautical Miles
	No.	No.
Cable and Wireless Limited—		
Halifax, N.S. to St. John's, N'f'ld. — St. John's, N'f'ld. to Porthcurnow, England	1	2,917
Halifax, N.S. to Horta, Azores—Horta, Azores to Porthcurnow, England	1	3,281
Bamfield, B.C. to Sydney, Australia	1	7,851
Bamfield, B.C. to Auckland, New Zealand	1	6,753
Halifax, N.S. to Bermuda	1	877
Commercial Cable Company—		
Canso, N.S. to Waterville, Ireland, via St. John's, N'f'ld	2	4,502
Canso, N.S. to Far Rockaway, N.Y., U.S.A	3	2,891
Canso, N.S. to Horta, Fayal, Azores—Horta, Azores to Waterville, Ireland	2	5,873
St. John's, N'f'ld. to Waterville, Ireland	1	1,874
St. John's, N'f'ld. to Far Rockaway, N.Y., U.S.A	2	2,594
Western Union Telegraph Company—		
North Sydney, N.S. to St. Pierre and Miquelon Islands	2	396
North Sydney, N.S. to Island Cove, N'f'ld	2	634
North Sydney, N.S. to Colinet, N'f'ld	1	323
Canso, N.S. to Hammel, N.Y., U.S.A	2	1,594
Canso, N.S. to Duxbury, Mass., U.S.A	1	573
Canso, N.S. to St. Pierre and Miquelon Islands	1	254
North Sydney, N.S. to Canso, N.S	2	253
Hearts Content, N'f'ld. to Valentia, Ireland	4	7,505
Hearts Content, N'f'ld. to Rantem Hut, N'f'ld	3	76
Bay Roberts, N'f'ld. to Penzance, England	4	8,419
Bay Roberts, N'f'ld. to Horta, Azores	1	1,341
Bay Roberts, N'f'ld. to Hammel, N.Y., U.S.A	2	2,757
Placentia, N'f'ld. to St. Pierre and Miquelon Islands	2	249
Islands Cove Hut, N'f'ld. to St. Pierre and Miquelon Islands	1	130
French Telegraph Cable Company—		
Canso, N.S. to St. Pierre and Miquelon Islands	1	257

Section 2.—Telephones

A brief account of the early development of telephones in Canada is given in the 1934-35 Year Book, p. 781.

Telephony in Canada to-day is moving ahead at a pace matching that of national progress generally. New devices, new systems and new services are being introduced to provide more and better communications. Operator dialing of long-distance calls is an important step towards faster and more accurate continent-wide telephone service. New equipment and methods fit into a long-range program to enable operators to dial calls straight through to distant telephones in Canada or the United States without the assistance of other operators along the route.

One of the new devices playing an increasingly important role in this development is the transistor, a discovery of telephone research. This tiny and amazingly simple electronic amplifier, based on an entirely new principle, can perform efficiently many of the functions of the ordinary vacuum tube and do many other things besides. The transistor's small size, low power consumption and expected long life make it suitable for application to submarine cable, compact military electronic equipment, computers and other devices for which the vacuum tube is not as well suited. In telephony very wide applications of the transistor are in prospect to increase the speed, accuracy and economy of switching equipment.

Telephone circuits to carry the growing volume of intercity traffic and to perform special communications functions are being provided on a scale to equal the development of switching systems. Canada's first microwave radio relay system, capable of carrying many simultaneous telephone conversations as well as television programs, was opened to service early in 1953, reaching from Toronto through Ottawa to Montreal. Extensions of this system are already being engineered and constructed further to improve long-distance telephone service and to extend the scope of television network broadcasting in Canada.

Telephone Systems.—The 2,888 telephone systems operating in 1952 included the three large provincial systems in Manitoba, Saskatchewan and Alberta, and smaller governmental systems in Ontario, Quebec and New Brunswick, together with the system operated by the Federal Department of Transport and the National Parks of Canada, Department of Resources and Development (now Northern Affairs and National Resources). Also included were 23 municipal systems, the largest being operated by the Cities of Edmonton, Fort William, and Port Arthur. Of the 2,269 co-operative telephone companies, 999 were in Saskatchewan, 838 were in Alberta and 204 in Nova Scotia. The largest among the 431 stock companies operating telephone systems in 1952 were the Bell Telephone Company and the British Columbia Telephone Company. Over 64 p.c. of the total telephone investment in Canada belongs to the Bell Telephone Company, and their telephones in Quebec and Ontario constitute 59 p.c. of the total number for Canada.

Telephone Equipment.—During the period 1943-52, there was an increase of 1,660,204 in the number of telephones in use, representing an advance from 14·3 to 23·2 telephones per 100 population.

Of the 3,352,366 telephones in Canada in 1952, 2,240,545 or 67 p.c. were operated from automatic switchboards and the remainder from manual switchboards. Automatic switchboards have largely displaced manual switchboards in the principal cities of Canada and are rapidly displacing them in all urban centres.

3.—Milages of Pole Line and Wire and Number of Telephones in Use, 1943-52

Note.—Figures from 1911 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Systems	Pole-Line Milage	Milage of Wire	Telephones in Use					
				Business	Residential	Rural[1]	Public Pay	Total	Per 100 Population
	No.	miles	miles	No.	No.	No.	No.	No.	No.
1943....	3,187	218,702	6,057,880	484,429	901,228	275,202	31,303	1,692,162	14·3
1944....	3,174	220,161	6,108,070	504,791	928,061	286,521	32,550	1,751,923	14·6
1945....	3,151	222,435	6,333,761	531,697	983,074	300,757	33,266	1,848,794	15·3
1946....	3,114	228,983	6,770,137	585,982	1,079,769	326,405	33,962	2,026,118	16·5
1947....	3,056	232,054	7,285,681	645,154	1,194,840	354,779	35,824	2,230,597	17·7
1948....	2,992	235,379	7,913,068	701,869	1,328,373	383,227	38,399	2,451,868	19·0
1949....	2,971	242,147	8,725,760	762,294	1,481,876	414,061	41,381	2,699,612	19·9
1950....	2,912	245,443	9,488,467	813,352	1,611,759	447,691	44,290	2,917,092	21·1
1951....	2,904	249,638	10,330,751	864,015	1,735,355	467,171	47,225	3,113,766	22·2
1952....	2,888	253,420	11,265,903	920,269	1,888,889	492,753	50,455	3,352,366	23·2

Includes telephones on rural exchange lines and urban exchange lines that have more than four parties.

The density of telephones in the different provinces is influenced by the urbanization of the population because the number of telephones used for business purposes is much greater in cities and towns than in rural areas.

4.—Telephones in Use, by Province, 1952

Province or Territory	On Individual Lines		On 2- and 4-Party Lines		On Rural Lines		Private Branch Exchanges and Extensions		Public Pay Stations	Total	Telephones per 100 Population
	Business	Residence	Business	Residence	Business	Residence	Business	Residence			
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
N'f'ld....	4,884	3,809	37	10,082	24	556	4,061	1,453	277	25,183	6·7
P.E.I....	1,424	1,384	211	3,588	350	3,849	1,400	421	77	12,704	12·3
N.S......	11,031	28,760	812	36,461	1,974	20,449	15,194	6,547	1,398	122,626	18·8
N.B......	7,142	14,613	1,219	27,868	1,842	15,944	11,841	3,830	1,136	85,435	16·2
Que......	84,399	130,221	10,757	329,120	16,397	73,312	152,921	33,356	20,045	850,528	20·4
Ont......	128,189	191,179	14,279	563,418	10,930	172,254	239,927	82,475	19,617	1,422,268	29·8
Man......	17,770	50,926	311	45,463	4,376	25,046	25,515	6,348	2,625	178,380	22·4
Sask.....	18,695	56,346	724	2,016	3,156	56,081	12,819	3,157	846	153,840	18·2
Alta.....	31,817	80,551	10	1,043	1,634	25,312	29,655	7,409	1,393	178,824	18·4
B.C......	37,230	8,656	1,017	147,969	5,323	53,856	54,925	10,323	3,041	322,340	26·9
Yukon...	24	5	29	92	45	43	—	—	—	238	2·6
Totals...	**342,605**	**566,450**	**29,406**	**1,167,120**	**46,051**	**446,702**	**548,258**	**155,319**	**50,455**	**3,352,366**	**23·2**

Telephone Finances and Calls Serviced.—The steady increases in capitalization, revenue and expenditure, salaries and wages and number of employees of telephone companies over the ten years 1943-52 are shown in Table **5**.

5.—Financial Statistics of Telephones, 1943-52

Note.—Figures from 1911 are given in the corresponding table of previous Year Books beginning with the 1938 edition.

Year	Capitalization		Cost of Property and Equipment	Gross Revenue	Operating Expenses	Net Operating Revenue	Salaries and Wages[1,2]	Employees[2]
	Capital Stock	Funded Debt						
	$	$	$	$	$	$	$	No.
1943...	136,566,967	163,430,008	393,230,035	94,406,757	81,894,162	12,512,595	33,581,699	20,694
1944...	137,719,691	161,307,878	401,862,799	101,082,353	87,739,283	13,343,070	37,261,134	21,978
1945...	138,680,893	153,934,250	418,434,346	109,899,862	96,417,884	13,481,978	41,830,117	25,599
1946...	158,430,612	156,099,974	454,214,793	120,675,038	105,750,974	14,924,064	54,147,432	33,170
1947...	183,469,710	171,810,793	521,183,575	134,666,857	116,623,149	18,043,708	66,623,983	35,578
1948...	194,465,399	238,762,614	615,941,540	150,533,349	131,570,434	18,962,915	77,497,980	38,851
1949...	229,208,219	280,736,941	716,519,781	169,113,048	153,066,308	16,046,740	90,634,477	42,326
1950...	274,088,405	300,765,453	806,826,198	198,823,483	178,193,661	20,629,822	102,093,078	45,396
1951...	286,003,119	360,533,546	909,581,399	240,762,657	213,824,471	26,938,186	117,677,652	47,387
1952...	335,575,292	435,249,639	1,027,527,807	279,001,814	244,506,402	34,495,412	131,370,832	48,207

[1] Includes salaries and wages charged to capital account. [2] Excludes rural lines in Saskatchewan.

6.—Financial Statistics of Telephones, by Province, 1952

Province or Territory	Capital Liability	Cost of Property and Equipment	Gross Revenue	Expenses	Net Income	Salaries and Wages[1]	Employees
	$	$	$	$	$	$	No.
N'f'ld.........	4,300,275	5,009,727	1,030,401	873,059	157,342	416,643	255
P.E.I..........	2,038,818	2,925,678	759,820	691,000	68,820	307,985	176
N.S...........	26,761,451	34,945,963	8,281,080	7,344,208	936,872	3,829,707	1,808
N.B...........	22,886,726	29,758,456	6,357,419	5,730,719	626,700	3,001,000	1,303
Que............	452,862,789[2]	679,007,138[2]	193,715,397[2]	170,396,625[2]	23,318,772	38,356,758	12,671
Ont............	12,433,165	22,367,813	7,911,039	6,862,584	1,048,455	53,819,453	19,279
Man...........	70,689,008	61,843,003	10,026,570	9,938,302	88,268	6,811,453	2,952
Sask...........	54,172,336	51,962,580	11,584,528	9,761,419	1,823,109	4,219,719[3]	1,628[3]
Alta...........	51,237,238	52,941,663	13,678,525	9,199,939	4,478,586	6,138,946	2,220
B.C...........	73,378,125	86,734,863	25,638,571	23,691,367	1,947,204	14,455,505	5,912
Yukon.........	65,000	30,923	18,464	17,180	1,284	13,663	3
Totals.......	**770,824,931**	**1,027,527,807**	**279,001,814**	**244,506,402**	**34,495,412**	**131,370,832**	**48,207**

[1] Includes wages charged to expenses and to capital. [2] Statistics of the Bell Telephone Company for Quebec and Ontario are included under Quebec. [3] Excludes wages and employees for rural systems.

Telephone Calls.—Table 7 is based on estimates made by systems operating almost 90 p.c. of all telephones in Canada. Actual count of calls on days of normal business was made and after adjustment for incompleted calls, holidays, Sundays, etc., the average was multiplied by 365. Practically all the long-distance calls were those actually completed.

7.—Local and Long-Distance Calls and Average Calls per Telephone and per Capita, 1943-52

NOTE.—Figures from 1928 will be found in the corresponding tables of previous Year Books beginning with the 1939 edition.

Year	Local Calls	Long-Distance Calls	Total Calls	Total Calls per Capita[1]	Average Calls per Telephone		
					Local	Long-Distance	Total
	No.	No.	No.	No.	No.	No.	No.
1943	2,929,446,000	50,348,000	2,979,794,000	253	1,731	29·8	1,761
1944	2,955,975,000	56,678,000	3,012,653,000	252	1,687	32·4	1,719
1945	3,145,492,000	64,788,000	3,210,280,000	266	1,701	35·0	1,736
1946	3,484,248,000	74,757,000	3,559,005,000	290	1,720	36·9	1,757
1947	3,760,569,000	82,695,000	3,843,264,000	306	1,686	37·1	1,723
1948	4,025,342,000	91,875,000	4,117,217,000	321	1,642	37·5	1,680
1949	4,454,024,000	105,232,000	4,559,256,000	339	1,650	39·0	1,689
1950	4,894,719,000	117,892,000	5,012,611,000	366	1,678	40·4	1,718
1951	5,146,238,000	127,406,000	5,273,644,000	376	1,653	40·9	1,694
1952	5,482,973,000	126,721,000	5,609,694,000	389	1,635	37·8	1,673

[1] Per capita figures are based on official estimates of population given at p. 137.

PART III.—RADIO COMMUNICATIONS

In the 1945 Year Book, pp. 644-646, an outline is given of the development of administrative control over radio-communication in Canada. *See also* p. 914 of this volume.

Section 1.—Administration*

The administration and regulation of radio-communication in Canada is carried out by the Telecommunications Division of the Department of Transport. The radio activities of the Division may be summarized as follows: (1) the administration of national and international radio laws and regulations and of regional agreements, involving the issuance of radio licences, inspection of radio stations, certification of radio equipment, examination of operators, allocation and monitoring of frequencies, study of radio wave propagation, compilation and settling of international accounts for radio messages, investigation and suppression of inductive interference to radio reception; and (2) construction, maintenance and operation of radio-communication stations and radio aids to marine and air navigation.

National and international radio laws and regulations include: the Canadian Broadcasting Act, the Radio Act and Regulations made thereunder; the International Telecommunication Convention and Radio Regulations annexed thereto; the Inter-American Radiocommunications Convention; the Inter-American Arrangement Concerning Radiocommunications; the North American Regional Broadcasting Agreement; those Articles of the International Civil Aviation Convention applicable to aeronautical radio requirements; the Canada Shipping Act and Radio Regulations for Ship Stations issued thereunder, and that part of the International Convention for the Safety of Life at Sea applicable to radio requirements for ships.

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* Revised in the Department of Transport, Ottawa.

Licensing and Operation.—In all branches of radio, basic control is exercised over the right to establish a station, assignment of frequencies, operator standards, operating procedure, and general regulations concerning the manner in which radio stations are used.

Under the Broadcasting Act, applications for licences to establish broadcasting stations, or for modification of existing stations, are referred to the Canadian Broadcasting Corporation for its recommendations to the Minister of Transport before being dealt with by the Department of Transport. The Canadian Broadcasting Corporation also controls the linking-up of stations that form networks and, in addition, the character of programs being broadcast. With these exceptions, the control of broadcasting stations is carried out by the Telecommunications Division of the Department of Transport.

The standard broadcast band is crowded with stations that are capable of interfering with one another over the entire North American region, particularly at night. A plan for the accommodation of the largest number of stations with the least interference was evolved as a result of extensive studies conducted by Canada, Cuba, the Dominican Republic, Haiti, the Bahama Islands, Mexico, and the United States and was embodied in the North American Regional Broadcasting Agreement.

Before a new standard broadcasting station can be licensed or before modifications can be made in an existing station, engineering briefs covering the selection or change of frequency, amount of power and design of the directional antenna system must be approved by the Department of Transport and notification sent to the signatory countries of the North American Regional Broadcasting Agreement. After the establishment or change is completed, proof of performance must be submitted to establish that the actual installation is in accordance with the approved plan.

The allocation of high frequencies and their efficient utilization requires reasonably accurate information on the transmission properties of the ionosphere which vary with the season, the sunspot cycle and other factors. This information is obtained from hourly measurements of the ionosphere made at some 70 points throughout the world and analysed by the Radio Physics Laboratory, Defence Research Board, Ottawa, and by the United States Bureau of Standards at Washington, D.C. The Canadian measurement stations are located at St. John's, N'f'ld.; Resolute Bay, Cornwallis Island, and Baker Lake, N.W.T.; Fort Chimo, Que.; Churchill and Headingley, Man.; Ottawa, Ont.; and Prince Rupert, B.C. Data from these stations are correlated by the Defence Research Board. Six frequency monitoring stations are maintained at suitable points across Canada to check operating frequencies of all classes of radio stations to ensure that they do not depart from the assigned frequency by an amount greater than that permitted by the international conventions.

Under the Safety of Life at Sea Convention and the Canada Shipping Act, most passenger ships and larger cargo ships must be fitted with radiotelegraph or radiotelephone equipment, primarily for distress use. Approval is given for each make and model of equipment that comes up to the required standard and, in addition, the ship station as a whole is inspected before the licence is issued and periodically thereafter. Foreign ships are subject to inspection before sailing from Canadian ports to ensure that they conform with the requirements of the Safety of Life at Sea Convention.

Analogous inspections of aircraft radio stations are carried out. Standards are provided specifying in detail the requirements to be met to ensure an airworthy installation. A certificate of airworthiness is granted to manufacturers for each type or model of aircraft radio equipment that has been demonstrated to meet the requirements. Only type-certificated equipment is accepted for use on scheduled airlines, though other equipment, if inspected, is acceptable for other aircraft.

Marine and aeronautical radio operator standards and related regulations are covered by international agreement. The International Telecommunication Convention prescribes the qualifications for radio operators on mobile stations and the Radio Act provides that all operators, both commercial and amateur, must pass examinations to prove their ability to operate the respective classes of stations on which they are engaged. Competent operators are required on all classes of stations in order that the technical requirements prescribed under international agreement be closely adhered to and are particularly essential on ships and aircraft stations in the interests of safety of life.

Investigation and Suppression of Inductive Interference.—Under the Broadcasting Act, the use of electrical equipment that will produce harmful interference to broadcast reception is not permitted. The Telecommunications Division of the Department of Transport maintains 54 cars equipped for measuring and locating sources of interference to broadcast reception. In addition to locating the sources of interference, advice is given as to how it can be suppressed or eliminated. These cars operate from the permanent Radio Inspection Offices located in 25 cities throughout Canada.

1.—Investigations of Inductive Interference, Years Ended Mar. 31, 1950-53

Item	1950	1951	1952	1953
	No.	No.	No.	No.
Sources Investigated—				
Electrical distribution systems and power lines	1,919	1,836	2,307	2,191
Domestic and commercial electrical apparatus	5,383	7,756	5,022	6,205
Defective receivers and radio apparatus	934	1,054	1,123	1,786
Industrial, scientific and medical apparatus	1,196	456	50	128
Miscellaneous (external cross-modulation, etc.)	2	2	4	7
Totals	**9,434**	**11,104**	**8,506**	**10,317**
Action Taken—				
Sources reported cured	7,219	8,976	7,177	9,068
Sources not reported cured	2,130	2,029	1,287	1,130
Sources having no economic cure	85	99	42	119

Industrial, scientific and medical apparatus is brought under strict control, in accordance with Regulations for Controlling Radio Interference and under the authority of Section 23 of the Canadian Broadcasting Act. Regulations require that radiation from such apparatus, which is liable to cause interference to radiocommunications, must be suppressed either by shielding or by replacing the apparatus with a non-interfering type. The Department of Transport conducts type-tests on diathermy and industrial heating apparatus submitted by manufacturers, and the types that fulfil the requirements of the Department are listed as non-interfering. The radiation from all such sources on communication frequencies must not exceed the tolerances specified by the Canadian Standards Association.

Radio Revenue.—Regulations concerning the rendering and settlement of international accounts are contained in the International Telecommunication Convention and Regulations. Sources of revenue include commercial ship and interstation messages handled by Departmental ships and land stations, radiotelegrams exchanged by foreign ships through Canadian coast stations, private commercial traffic via Departmental airway radio stations, and radio services rendered to aircraft of private airline companies by such stations. The volume of messages and words handled during the year ended Mar. 31, 1954, and the revenue therefrom, together with revenue from licence fees, examination fees, fines and forfeitures, rentals, etc., are given in Table 2.

2.—Messages and Words Handled and Revenue Collected by the Department of Transport, Year Ended Mar. 31, 1954

Item	Messages	Words	Revenue
	No.	No.	$
Marine—			
East Coast	389,510	11,505,369	100,245
Great Lakes	64,343	1,164,748	26,685
West Coast	467,039	14,933,504	94,197
Hudson Bay and Straits	178,437	10,965,950	5,906
Premium revenue	...	...	23,121
Airways—			
Private, commercial and airline messages	..	..	34,665
Radio service to airline companies	..	..	396,288
Telephone service	..	..	634
Totals, Marine and Airways	**1,099,329**	**38,569,571**	**681,741**
Other Radio Revenue—			
Examination fees—Radiotelegraph Operators' Certificates of Proficiency			1,574
Fines and forfeitures under the Radio Act, 1938[1]			1,828
Licence Fees—			
Aircraft stations			13,033
Amateur experimental stations			17,415
Private commercial stations			74,195
Public commercial stations			11,190
Ship stations			35,468
Miscellaneous			1,526
Mess Receipts—Radio Aviation			3,006
Publications			1,260
Power service			9,331
Refunds on previous year's expenditure			11,508
Rentals (Communication Facilities)			3,181
Living quarters			144,373
Space, control lines and power			23,202
Transmission line privileges			218
Miscellaneous			1,700
Sundry sales and services			444
Miscellaneous			310
Total, Other Radio Revenue			**354,762**
Grand Total, Radio Revenue[1,2,3]			**1,036,503**
Revenue from radio receiving and private broadcasting station licences, etc.[2,3]			379,368

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[1] The issuance of private receiving radio licences was discontinued as from Apr. 1, 1953.

[2] Applied to the operations of the Department of Transport.

[3] Section 14 (1) of the Canadian Broadcasting Act, provides that "The Minister of Finance shall deposit, from time to time, in the Bank of Canada, or in a chartered bank to be designated by him, to the credit of the Corporation (a) the gross amount of moneys received in each year from licence fees in respect of private receiving licences and private station broadcasting licences without deducting therefrom any costs of collection or administration".

Section 2.—Total Radio Stations and Radio Services

The total number of radio stations in operation in Canada and on ships and aircraft registered therein are shown by classes in Table 3. Of these stations, 642 were operated by the Department of Transport. The Department of National Defence, in addition to stations established for military purposes, operated 11 permanent stations and two summer stations, situated along the Mackenzie River and in Yukon Territory, on behalf of the Department of Northern Affairs and National Resources. The Department operated 113 stations to provide communication and time-signal service for survey parties and for the protection and administration of National Parks. The Department of Public Works operated six stations, the Department of Agriculture five stations, the Department of National Health and Welfare 12 stations, the Department of National Revenue two stations, the Department of Citizenship and Immigration four stations, the Department of Fisheries nine stations, the Department of Mines and Technical Surveys 61 stations, the Royal Canadian Mounted Police 902 stations, and the National Research Council 17 stations, 16 of which were experimental.

Stations operated by the Canadian Broadcasting Corporation numbered 140 and those by private owners, 187.

3.—Radio Stations in Operation, by Class, as at Mar. 31, 1954

Class	No.	Class	No.
Department of Transport Stations—		**Other Stations—**	
Coast stations	51	Ship stations (class A)	3,768
Radio-beacon stations	73	Ship stations (class B–receiving only)	19
Radio links	8	Limited coast stations	18
Radiotelephone stations	2	Aircraft stations	1,415
Lighthouse radiotelephone stations	170	Public commercial stations	193
Canal radiotelephone stations	5	Private commercial stations	10,721
Loran stations	6	Municipal services stations	304
Ionosphere stations	9	Private commercial broadcasting stations (sound)—	
H.F. direction finding stations	1	Operated by the Canadian Broadcasting Corporation	106[3]
Monitoring stations	6	Operated by private owners	183
Land stations	1	Private commercial broadcasting stations (television)—	
Ship stations (class A)	40	Operated by the Canadian Broadcasting Corporation	5
Aircraft stations	27	Operated by private owners	4
Radio range stations	94[1]	Technical or training schools	9
Combined radio range, and aeronautical communications stations	55	Experimental stations	210
Combined aeronautical radiobeacon and communications stations	3	Commercial receiving stations	362
Instrument landing installations	25	Commercial receiving stations (special)	11
Aeronautical radiobeacons	19	Amateur experimental stations	6,968
Aeronautical communications stations	32		
Fan marker stations	11		
Weather reporting stations	4[2]	**Total, All Stations**	**24,938**

[1] Station location (Z) markers are installed at 93 radio range stations. [2] The station at Port Harrison, Que., also performs restricted coast station service during the season of navigation, but as it is primarily a weather-reporting station it is shown under this heading only. [3] Includes 51 repeater stations.

The foregoing classes are numerous and complicated by the fact that many of them perform closely related functions. Descriptions of the services provided by different types of government-operated stations are given in the 1951 Year Book, pp. 804-808.

The Canadian Overseas Telecommunication Corporation.—By virtue of the Canadian Overseas Telecommunication Corporation Act which came into force on Jan. 1, 1950 (R.S.C. 1952, c. 42), the Canadian Overseas Telecommunication Corporation was established to acquire, maintain and operate the external telecommunication facilities in Canada of Cable and Wireless Limited and the Canadian Marconi Company Limited. The Corporation consists of five Directors, one of whom is also the President and General Manager of the Corporation.

By proclamation in the *Canada Gazette* of June 7, 1950, the said facilities of Cable and Wireless Limited and of the Canadian Marconi Company Limited were expropriated and, since that date, the Corporation has been successfully operating and maintaining these external telecommunication facilities in Canada. On May 1, 1952, a final settlement was made with respect to the acquisition of the physical assets at a total cost of $3,143,781. These physical assets include Headquarters established at Montreal, Que., overseas cable stations at Bamfield, B.C., Halifax, N.S., and Harbour Grace, N'f'ld., and wireless transmitting and receiving stations at Drummondville and Yamachiche, Que., respectively. The Corporation has since constructed a cable station at St. John's, N'f'ld.

The purposes of the Corporation are:—

(*a*) to establish, maintain and operate in Canada and elsewhere external telecommunication services for the conduct of public communications;

(*b*) to carry on the business of public communications by cable, radiotelegraph, radiotelephone or any other means of telecommunication between Canada and any other place and between Newfoundland and any other part of Canada;

(*c*) to make use of all developments in cable and radio transmission or reception for external telecommunication purposes as related to public communication services;

(*d*) to conduct investigations and researches with the object of improving the efficiency of telecommunication services generally; and

(*e*) to co-ordinate Canada's external telecommunication services with the telecommunication services of other parts of the Commonwealth.

The Avalon Telephone Company operates public commercial stations in Newfoundland to supplement its wire lines and to provide telephonic communication with isolated communities.

The Manitoba Telephone System operates radiotelephone links involving stations at the following points: Riverton, Manigotagan, Hecla Island, Gimli, Norway House, Bissett, Great Falls, The Pas, Snow Lake and Winnipeg, Man. In addition, the Manitoba Telephone System operates stations at Gimli, The Pas and Norway House, Man., to provide terminal service for ships operating on Lake Winnipeg.

Norwesto Communications Limited operates a public commercial radiotelephone service consisting of stations located at Kenora, Red Lake, Ball Lake, Sioux Narrows, Dryden, Sioux Lookout, Minaki and Redditt, which are used in conjunction with the ordinary telephone exchanges to provide telephonic communication to privately owned stations at isolated points throughout the northwestern part of the Province of Ontario.

The Red Lake Telephone Company operates a public commercial radiotelephone station at Madsen, Ont., to provide a connection between the local wire telephone system and the Norwesto Communications Limited network.

The Okanagan Telephone Company operates a public radiotelephone service between Revelstoke and Arrowhead, B.C., and a public commercial terminal station at Kelowna to provide telephonic communication to privately owned stations at isolated points in the Kelowna area.

Provincial Government Services.—Provincial authorities use radio services in many Departments. Table 4 shows the number of stations operated by the Provincial Governments.

4.—Radiocommunication Stations Operated by Provincial Governments, as at Mar. 31, 1954

Province	Stations	Province	Stations
	No.		No.
Newfoundland	28	Manitoba	212
Nova Scotia	16	Saskatchewan	435
New Brunswick	30	Alberta	253
Quebec	318	British Columbia	692
Ontario	1,145	**Total**	**3,129**

Other Radiocommunication Services.—Radiotelegraphy and radiotelephony are used throughout Canada to provide means of maintaining contact with isolated points beyond the reach of the regular telegraph and telephone facilities.

Municipal government departments have steadily increased their use of radio to facilitate operations. This increase is noted in all categories of municipal services using radio as a medium of communication with vehicles, i.e., police, fire, engineering, hydro, etc. In addition, the trend toward expansion in the employment of radio for urban land mobile communication has continued and has shown no signs of abating. Such services as taxi, heavy construction, ready-mix concrete, oil pipeline construction and operation, veterinarian and rural medical have participated extensively in this increase. Public mobile radio relay message services (telephone answering service) have also been licensed to operate in a number of cities including Montreal, Toronto and Edmonton.

Public utilities, power companies, provincial power commissions, oil exploration and mineral development organizations have considerably expanded their use of radio in both urban mobile and point-to-point radio fields.

Commercial air-carrier organizations including those performing off-route charter services were licensed to operate 460 ground communications stations, 30 navigational aids stations and 516 aircraft stations. A relatively large number of licences were also issued to individuals, manufacturers, mining and oil companies, and others, to authorize the operation of aircraft stations and associated ground stations in conjunction with normal business activities.

A total of 2,460 ground stations and 1,415 aircraft stations were operated by commercial air-carrier organizations, individuals and business concerns during the year ended Mar. 31, 1954.

Commercial Point-to-Point Radiotelephone Services.—The North-West Telephone Company operates a radiotelephone service between points in British Columbia not hitherto served by telephone communications. Under licences granted by the Department of Transport, the Company has established a number of permanent public commercial radiotelephone stations in that Province. These stations are authorized to provide communication to private commercial radiotelephone stations located at isolated points in the Province. This Company is also licensed to establish limited coast stations at Lulu Island, Powell River, Vancouver, Nanaimo, Victoria, Harrison Lake, Parksville, Alert Bay, Campbell River, Hardwicke Island, Halberg, Sumas Mountain, and Prince Rupert, B.C., to provide a ship-to-shore service. These stations, used in conjunction with the ordinary telephone exchange, provide a duplex-radiotelephone service to isolated points and to certain ships at sea, and also provide a limited amount of service to stations of the land mobile category.

The North-West Telephone Company is also licensed to provide emergency radiotelephone communication at any point in British Columbia and to carry out tests for extending the existing radiotelephone service throughout the Province.

To provide trans-river communication in the lower St. Lawrence area, the following companies operate stations in the Province of Quebec at La Malbaie, Tadoussac, Rivière-du-Loup, Rimouski, Matane, Montmagny, St. Antoine, Ile aux Grues, Cap Chat, Forestville, Trinity Bay, Seven Islands, Baie Comeau, Clarke City, Gaspé Copper Mines, Mont Louis, Chicoutimi, and Tour à Pica: La Compagnie de Téléphone de Charlevoix et Saguenay, La Compagnie de Téléphone de Kamouraska, the Quebec Telephone Corporation, Gulf of St. Lawrence Telephone Company and La Compagnie du Téléphone Saguenay, Que.

The wireline facilities between Saint John, N.B., and Digby, N.S., between Saint John, N.B., and Halifax, N.S., between Red Head, N.B., and Mount Hanley, N.S., between Lutz Mountain (Moncton), N.B., and Egmont, P.E.I., and between Charlottetown, P.E.I., and New Glasgow, N.S., are supplemented by radiotelephone lines.

The stations at Saint John, Red Head, and Lutz Mountain (Moncton), are operated by the New Brunswick Telephone Company. The terminals at Digby, Halifax, New Glasgow and Mount Hanley are operated by the Maritime Telephone and Telegraph Company. The stations at Charlottetown and Egmont are operated by the Island Telephone Company.

The Bell Telephone Company of Canada provides a land mobile terminal radiotelephone service at numerous points in Ontario and operates a microwave link between Toronto and Ottawa, Ont., and Montreal, Que., which carries television programs and is capable of providing many additional telephone circuits. Radio links are also maintained between Pelee Island and Leamington, Ont., and across the St. Lawrence between Sorel and Joliette, Que.

The Canadian National Railway Company operates an extensive radiotelegraph and radiotelephone service in Newfoundland including links between Table Mountain, N'f'ld., Cape North, N.S., and New Waterford, N.S. This Company is also authorized to provide a limited coast-station service at Port aux Basques, N'f'ld.

The Canadian National Railway Company and the Canadian Pacific Railway Company are jointly establishing microwave circuits between Toronto and Windsor and between Montreal and Quebec City.

Radio Aids to Navigation.—*Marine Radio Stations.*—Detailed information covering all marine radio aids to navigation is contained in the annual publication, *Radio Aids to Marine Navigation* which, along with the supplementary *Notices to Mariners* may be obtained upon request from the Department of Transport, Ottawa.

Coast Radio Stations.—The primary purpose of the coast radio station organization is to provide radiocommunication facilities whereby any ship within 500 miles of Canada's coast may establish communication with shore. Information is broadcast daily to navigators at advertised hours. In addition, urgent information such as hurricane warnings is broadcast immediately upon receipt.

Coast stations CFH Halifax and CKN Vancouver, operated jointly by the Department of Transport and the Royal Canadian Navy, participate in the British Commonwealth scheme for providing long-range communication with ships.

Coast Radio Direction Finding Service.—A direction finding service is established to enable ships to obtain—without charge—a line of bearing from the Direction Finding station.

Radio-beacon Service.—Radio beacons are established for the purpose of enabling any ship or aircraft equipped with a direction finder to determine its bearing or direction in relation to the radio-beacon station.

Generally speaking, in clear weather, each station transmits, at advertised hours, its characteristic signal for three periods of one minute separated by silent intervals of two minutes. In fog, all stations operate continuously, maintaining a uniform time cycle of three minutes, each station transmitting in its proper sequence for one minute separated by silent intervals of two minutes. At certain stations the radio-beacon signals are synchronized with the emissions of the fog alarms to permit distance finding during foggy weather.

In addition to the above radio-beacon facilities, ships equipped with direction finding apparatus may, upon request, obtain signals for the purpose of taking bearings from any of the coast stations.

Loran Stations.—Loran (long-range aid to navigation) is a system of position finding based on the difference in the time arrival of pulse-type radio signals transmitted from a pair of stations. This time difference is measured on a Loran receiver and is used in conjunction with specially prepared charts or tables to establish a line of position. The intersection of two or more lines of position determined from two or more pairs of stations provides the required position.

Medical Advice to Ships at Sea.—Ships at sea may obtain medical advice from any coast station. The messages are delivered to the port medical officer of the Department of National Health and Welfare and replies are transmitted to the ship free of charge.

Assistance Rendered by Radio to Vessels in Emergency.—Coast stations have many time, given valuable assistance to vessels in danger and a great many of the smaller ships are being fitted with radio to avail themselves of this service.

Aids to Air Navigation.—Radio aids to air navigation are provided from coast to coast and from the United States border to the Arctic along the airways used by the many Canadian airlines, United States airlines flying over Canadian territory, and Canadian and United States military aircraft. To construct and maintain these many facilities, specially trained engineers and technicians are located at six district offices: Moncton, N.B.; Montreal, Que.; Toronto, Ont.; Winnipeg, Man. Edmonton, Alta.; and Vancouver, B.C.

Radio Ranges.—The principal radio aid to air navigation provided by the Department of Transport is the radio range. These stations, located approximately every 100 miles along airways, provide specific track guidance to pilots by means of audible signals. The signals may also be used for the purpose of obtaining direction finding bearings from the aircraft. In addition, radiotelephone communications are provided between the ground and aircraft by means of which pilots may obtain weather and other information concerning the safety of flight. There are now 94 stations in operation, a new range having been commissioned at Nanaimo, B.C. Work is continuing on the establishment of additional radio ranges to serve the airports at Terrace, B.C., and Sudbury, Ont.

Radio Beacons.—These stations provide radio signals with which pilots may use their direction finding equipment to obtain relative directional bearings to assist in the navigation of their aircraft. Nineteen are now in operation, new ones having been established at Hope, B.C., Mill Bay, B.C., and Lloydminster, Sask. Radio beacons at Prince Albert and Embarras are equipped with radiotelephone facilities to provide communications to and from aircraft. Construction is proceeding of a beacon at Eon, Que., to replace the Mecantina radio range destroyed by fire in the summer of 1952. Additional radio beacons at Terrace, Kitimat, and Alert Bay in British Columbia, and at Beaverlodge, Sask., are in various stages of planning or construction. The beacon at Greata, B.C., was moved to Naramata, B.C.

Fan Markers.—These facilities, operating on very high frequencies, indicate to a pilot when he is directly overhead. Normally, they are placed on an airway to inform the pilot when he may safely lose altitude after passing high terrain or to indicate accurately the distance from an airport. Eleven of these stations are now in operation. The fan marker at Greata, B.C., was moved across Okanagan Lake to Naramata, B.C.

Station Location Markers.—These facilities are similar to fan markers except that the signal radiated is such that aircraft may receive the same indication irrespective of the direction of flight. They are installed at the same location as a radio range to enable a pilot to determine when he is exactly over the station, thus obtaining definite indication of position. Station location markers are installed at all radio range sites except Killaloe, Ont.

Direction Finding Stations.—A high frequency direction finding station for determining the bearing of aircraft from the station is in operation at Cape Harrison, N'f'ld.

Instrument Landing Systems.—Instrument Landing Systems provide radio signals which, when received by special radio equipment aboard aircraft, permit pilots to approach airports for landing during periods of very low visibility. An installation normally consists of a localizer transmitter providing lateral guidance to the runway, a glide path transmitter providing slope guidance to the approach end of the runway, two marker transmitters providing distance indications from the runway at approximately four and one-half miles and 3,500 ft. from the runway, and a low-power radio beacon (compass locator) to assist in holding procedures and lining up on the localizer course. The localizer and marker transmitters operate on very high frequencies, the glide path on ultra high frequencies and the compass locators on low and medium frequencies. Twenty-five instrument landing systems are now in operation, a new installation having been completed at Patricia Bay, B.C. The system under construction to serve Runway 26 at Patricia Bay airport has a localizer differing from those normally used in that it is highly directive, having only a front course, and is so controlled that clearance indication is shown only 10° on either side of the centre of the on-course signal.

Aeronautical Communication Stations.—To assist in providing the required communication between aircraft and the ground, 32 radio stations, operating for the most part on high frequencies, are located at strategic points across the country and into the Arctic. These stations provide communication to both domestic and international air carriers. The international communications stations at Vancouver, B.C., Montreal, Que., Moncton, N.B., and at Goose and Gander, N'f'ld., form a major contribution on the part of Canada to international aviation. Two international stations, at Sydney and Yarmouth, N.S., provide very high frequency coverage to international airlines flying the Gander-New York route. The services provided by these international stations may be divided broadly into three classes: (1) communication facilities for Meteorological Services ;(2) communication facilities for the Air Traffic Control Services; and (3) facilities for the benefit of the airline operating agencies to provide communication with their aircraft and between their despatch offices.

Because Class 3 is provided solely for the convenience of the airline operating agencies, a system of charges has been introduced to recover from the airlines the cost of providing this portion of the service. The charge is $13 per aircraft per oceanic crossing. Revenue for the year ended Mar. 31, 1954, was approximately $227,000.

Very High Frequency Communications.—Owing to the overcrowded conditions of the high frequency portion of the radio spectrum and to the fact that communication in the very high frequency portion of the spectrum is relatively free from atmospheric interference, progress is being made in providing air-ground communications on the latter frequencies. Very high frequency air-ground communication facilities are now provided at 93 range stations, 2 radio-beacon stations, 7 air traffic control centres, and all 21 airport control towers. Very high frequency equipment has been provided also in all control towers and in a large number of airport vehicles to facilitate direction to traffic on the airport surface.

Weather Reporting Stations.—Weather reporting stations are located at strategic points throughout the country from coast to coast and into the Far North. Reports from these stations enable meteorological personnel to forecast weather trends that are of great importance to both domestic and transoceanic flying operations. Some of these stations are located in remote areas with which radio is the only means of communication. Radio stations are established in such areas to enable the weather reports to be rapidly forwarded to meteorological offices where the data are correlated. Four such communications stations are located at Dease Lake, B.C., Nitchequon and Indian House Lake, Que., and Coppermine, N.W.T.

Marine Communications.—Two coast stations operating on both medium and high frequencies are maintained in conjunction with the aeronautical stations at Seven Islands, Que., and Goose, N'f'ld., for the exchange of communications between ships and the shore. Communications are conducted by both radiotelegraph and radiotelephone. The station at Frobisher, N.W.T., provides radiotelephone facilities on high frequencies only.

Improvements in Radio Aids to Air Navigation.—The Montreal to Windsor airway is being equipped with VHF omnidirectional ranges. This type of facility enables the pilot in the aircraft to select, at will, his desired course. These stations operate in the very high frequency band between the portion reserved for the ILS localizers and that portion used for very high frequency. A contract has been let for a radar ground-controlled approach system for Gander, N'f'ld., airport. Work on the design of buildings, towers and underground cable system is continuing.

Wireline Services.—The Airway Traffic Control interphone system was expanded to satisfy requirements stemming from an increasing volume of both civil and military air operations. Telecommunications Division teletype circuits were revised to facilitate the handling of air operational traffic. Additional local teletype, telephone and control-line facilities were engaged to meet new and increased requirements of the Branch. Major revisions to and repair of various government-owned control lines were undertaken.

Other Communication Facilities.—Public address systems are provided at Air Terminal Buildings. Co-ordination of various wireline service requirements was undertaken. Existing systems, such as pneumatic tube facilities, were analysed and evaluated. A National Weatherfax System to be used for transmitting weather data in the form of maps by wire line and radio to designated stations across the country was commissioned.

Section 3.—The Canadian Broadcasting Corporation

The history of the Canadian Broadcasting Corporation is given in the 1947 Year Book, pp. 737-740. The Corporation operates under authority of the Canadian Broadcasting Act (R.S.C. 1952, c. 32) and is headed by a Board of 11 Governors, appointed by the Governor in Council and chosen to give representation to the principal geographical divisions of Canada. The Chairman is required to devote the whole of his time to performance of his duties under the Act. The Board determines and supervises policy, but day-to-day operations and executive direction are the responsibility of the General Manager. The CBC is organized in the following divisions: Program, International Service, Engineering, Commercial, Press and Information, Broadcast Regulations, Station Relations, Personnel and Administration, and Treasury.

Under the Canadian Broadcasting Act, the CBC is responsible for regulations controlling the establishment of networks and the proportion of time that may be devoted to advertising in broadcast programs. The CBC neither exercises, nor authorizes any private station to exercise on its behalf, censorship of any broadcast program. The responsibility of having the regulations observed rests with the individual station management.

Frequency Modulation.—The development of frequency modulation is given in the 1948-49 Year Book, p. 773. On Apr. 1, 1954, there were five CBC and 29 privately owned frequency modulation stations in operation.

Television.—Regular CBC television broadcasting was begun from Toronto (CBLT) and Montreal (CBFT) in September 1952, with a program schedule of about 18 hours a week. By July 1954, the schedule averaged 50 hours a week of all types of television programs. At the same time the number of CBC stations in operation was increased to six—CBUT Vancouver, CBWT Winnipeg, CBLT Toronto, CBOT Ottawa, CBFT and CBMT Montreal. Two more CBC television outlets—one in Halifax and a French-language outlet for Ottawa—are under construction.

Twenty cities across Canada have been recommended for private television operating licences, and five private stations were on the air in July 1954. At the same time, Canadian television service had reached 60 p.c. of the population of Canada through CBC and privately owned affiliates. This represents the fastest growth in TV population coverage in the world. When the stations now projected are completed, more than 70 p.c. of all Canadians will be within reach of the national television system.

Although the linking of all Canadian television stations from coast to coast for instantaneous telecasting of programs may take several years because of the distances and difficult terrain involved, microwave facilities had reached London, Ont., on the west, and Quebec City on the east by July 1954.

As gauged by TV sets in use the advent of Canadian television has brought extensive developments in the electronics industry. When CBC television began in September 1952, 146,000 television sets were in use in Canada. One year later that number had tripled and by July 1954 more than 800,000 receivers were in use in Canadian homes.

In the year ended Mar. 31, 1954, CBC television spent $1,322,000 on Canadian talent for live Canadian TV production. In addition, more than $181,000 was paid to writers and for the rights to plays. Music copying and music rights accounted for another $38,000.

Television Program Service.—A total of 7,890 hours of television programs were presented over the five CBC television stations operating during the year ended Mar. 31, 1954. CBLT in Toronto made available to its viewers a total of 2,788 hours, with CBFT presenting 1,931 hours, CBOT 2,117 hours, CBUT (which started in December 1953) 563 hours, and CBMT (the English-language outlet in Montreal which began operation in January 1954) 490 hours. Until CBMT commenced operation, CBFT in Montreal provided a separate service for its French and its English viewers and, in addition, made available a number of programs suitable to both.

Dealing with the stations in this same order, of the total hours broadcast, nature of the programs was 77·9 p.c. sustaining for Toronto, 71·5 p.c. for Montreal, 76·9 p.c. for Ottawa, 67·1 p.c. for Vancouver, and 48·9 p.c. for Montreal's English-language outlet. The balance of their schedules was taken up with commercially sponsored programs.

Radio Broadcasting Facilities.—Under Section 24 of the Canadian Broadcasting Act, the CBC is required to review all applications for licences for new stations, applications for increases in power and for changes in frequency or location. Two considerations are involved: (1) there must be non-interference with the present and proposed facilities of the CBC, and (2) that high-power transmission facilities, on both long-wave and short-wave bands, are reserved for use by the CBC. Within these limitations, it is the policy of the Board to serve community interests by giving every practical encouragement and assistance to local stations.

The CBC operates three networks: the Trans-Canada and Dominion networks serving English-language audiences from the Atlantic to the Pacific, and the French-language network extending from the new CBC station in Moncton, N.B., to Edmonton, Alta.

The Trans-Canada network is made up of 25 basic stations—12 CBC-owned and 13 privately owned. There are 17 supplementary stations, four of which are CBC-owned Newfoundland stations. The Dominion network consists of 31 basic stations, of which 30 are privately owned. Nineteen supplementary privately owned stations also receive Dominion network service. The French network has five basic stations, four of which are CBC-owned and one privately owned, and 18 privately owned affiliated supplementary stations.

In 1954, the CBC had 21 stations, eight of which had 50,000-watt transmitters. In order to present programs at suitable times and to give expression to varying interests in the six regions, the CBC maintains regional offices. Production facilities are maintained at St. John's, N'f'ld., Sydney and Halifax, N.S., Moncton, N.B., Chicoutimi, Quebec City, and Montreal, Que., Ottawa, Toronto, and Windsor, Ont., Winnipeg, Man., Regina, Sask., Edmonton, Alta., and Vancouver and Prince Rupert, B.C.

5.—Broadcasting Stations of CBC Networks, as at Apr. 1, 1954

NOTE.—The stations marked with an asterisk (*) are CBC-owned.

Station Location		Frequency	Power
		kc.	watts
Trans-Canada Basic Network—			
CBI*	Sydney	1,570	1,000
CBH*	Halifax	1,330	100
CBA*	Sackville	1,070	50,000
CHSJ	Saint John	1,150	5,000
CFNB	Fredericton	550	5,000
CBM*	Montreal	940	50,000
CBO*	Ottawa	910	1,000
CKWS	Kingston	960	5,000
CBL*	Toronto	740	50,000
CFCH	North Bay	600	1,000
CJKL	Kirkland Lake	560	5,000
CKGB	Timmins	680	5,000
CKSO	Sudbury	790	5,000
CBE*	Windsor	1,550	10,000
CJIC	Sault Ste. Marie	1,490	250
CKPR	Fort William	580	1,000
CBW*	Winnipeg	990	50,000
CBK*	Watrous	540	50,000
CBX*	Edmonton	1,010	50,000
CJOC	Lethbridge	1,220	5,000
CFJC	Kamloops	910	1,000
CKOV	Kelowna	630	1,000
CJAT	Trail	610	1,000
CBU*	Vancouver	690	10,000
CFPR*	Prince Rupert	1,240	250
Trans-Canada Supplementary—			
CBN*	St. John's	640	10,000
CBY*	Corner Brook	790	1,000
CBG*	Gander	1,450	250
CBT*	Grand Falls	1,350	1,000
CKBW	Bridgewater	1,000	1,000
CJQC	Quebec	1,340	250
CKOC	Hamilton	1,150	5,000
CHLO	St. Thomas	680	1,000
CHOK	Sarnia	1,070	[1]
CFAR	Flin Flon	590	1,000
CFGP	Grande Prairie	1,050	1,000
CKLN	Nelson	1,240	250
CKPG	Prince George	550	250
CJDC	Dawson Creek	1,350	1,000
CJCA	Edmonton	930	5,000
CKCK	Regina	620	5,000
CFAC	Calgary	960	5,000
Dominion Basic Network—			
CJCB	Sydney	1,270	[1]
CHNS	Halifax	960	5,000
CJFX	Antigonish	580	5,000
CJLS	Yarmouth	1,340	250
CFCY	Charlottetown	630	5,000
CKCW	Moncton	1,220	10,000
CFBC	Saint John	930	5,000
CKNB	Campbellton	950	1,000
CKTS	Sherbrooke	1,240	250
CFCF	Montreal	600	5,000
CKOY	Ottawa	1,310	[1]
CHOV	Pembroke	1,350	1,000
CFJR	Brockville	1,450	250
CHEX	Peterborough	1,430	1,000
CJBC*	Toronto	860	50,000
CFPL	London	980	5,000
Dominion Basic Network—con.			
CFCO	Chatham	630	1,000
CFPA	Port Arthur	1,230	250
CJRL	Kenora	1,220	1,000
CKRC	Winnipeg	630	5,000
CKX	Brandon	1,150	1,000
CJGX	Yorkton	940	1,000
CKBI	Prince Albert	900	5,000
CFQC	Saskatoon	600	5,000
CHAB	Moose Jaw	800	5,000
CKRM	Regina	980	5,000
CFRN	Edmonton	1,260	5,000
CFCN	Calgary	1,060	10,000
CHWK	Chilliwack	1,270	1,000
CJOR	Vancouver	600	5,000
CJVI	Victoria	900	1,000
Dominion Supplementary—			
CHML	Hamilton	900	5,000
CKTB	St. Catharines	620	1,000
CFOR	Orillia	1,570	[1]
CHNO	Sudbury	1,440	1,000
CHAT	Medicine Hat	1,270	1,000
CJIB	Vernon	940	1,000
CKFI	Fort Frances	800	[2]
CKCV	Quebec	1,280	1,000
CKSF	Cornwall	1,230	250
CJBQ	Belleville	1,230	250
CKCR	Kitchener	1,490	250
CJCS	Stratford	1,240	250
CKPC	Brantford	1,380	1,000
CKNX	Wingham	920	1,000
CFOS	Owen Sound	1,470	1,000
CKLW	Windsor	800	50,000
CKRD	Red Deer	850	1,000
CKLC	Kingston	1,380	1,000
CKOK	Penticton	800	1,000
French Basic Network—			
CBJ*	Chicoutimi	1,580	10,000
CBV*	Quebec	980	1,000
CBF*	Montreal	690	50,000
CBAF*	Moncton	1,300	5,000
CHNC	New Carlisle	610	5,000
French Supplementary—			
CJEM	Edmundston	1,380	1,000
CJBR	Rimouski	900	5,000
CHLT	Sherbrooke	900	1,000
CHGB	Ste. Anne-de-la Pocatière	1,350	[3]
CKCH	Hull	970	1,000
CJFP	Rivière-du-Loup	1,400	250
CKVD	Val d'Or	1,230	250
CHAD	Amos	1,340	250
CKRN	Rouyn	1,400	250
CKLS	La Sarre	1,240	250
CKLD	Thetford Mines	1,230	250
CFCL	Timmins	580	1,000
CKSB	St. Boniface	1,250	1,000
CHFA	Edmonton	680	5,000
CFNS	Saskatoon	1,170	1,000
CFRG	Gravelbourg	1,230	250
CHNO	Sudbury	1,440	1,000
CKBL	Matane	1,250	1,000

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[1] 5,000 watts during daytime; 1,000 watts at night.
[2] 1,000 watts during daytime; 250 watts at night.
[3] 1,000 watts during daytime; 500 watts at night.

CBC International Service (Shortwave).—The International Service, inaugurated on Feb. 25, 1945, is operated by the CBC on behalf of the Government of Canada. Its principal aims are to tell the people of other countries about life in Canada and to help to unify the western world in the defence of freedom.

The International Service has been growing over the years to meet the requirements of Canada's expanding interest and influence abroad. The two 50,000-watt transmitters at Sackville, N.B., are linked by approximately 600 miles of land lines to the studios and the program headquarters of the service in the Radio Canada Building at Montreal. Programs are broadcast daily in 16 languages—English, French, Dutch, German, Italian, Danish, Swedish, Norwegian, Finnish, Spanish, Portuguese, Czech, Slovak, Russian, Ukrainian, and Polish. In addition, regular programs are prepared on tapes and discs for relay over the radio broadcasting facilities of Austria and Greece. The excellent technical facilities of the CBC International Service assure a signal in Europe which compares very favourably with any other from the North American Continent. The International Service has succeeded in reaching increasingly large audiences in Europe, Central and South America, the Caribbean, the South Pacific area and the far reaches of the North American Continent.

More than 30,000 letters involving over 55,000 items of information are received yearly from listeners in all parts of the world, attesting to the strength of the International Service signal and to a wide interest in Canada and Canadian radio programs. These inquiries are answered by the language sections or are referred to the departments of government concerned. Technical reception reports are also verified.

Each month the International Service mails a monthly program schedule to listeners in Europe and Latin America. These schedules, in the form of illustrated booklets, contain program notes, times and frequencies, and also touch on some aspect of Canadian life. There are two editions—one for Europe and one for Latin America. They are printed in the languages of the countries to which they are sent and are mailed free on written request. Both editions together have a circulation of almost 150,000.

In addition to broadcasting Canadian programs for more than 16 hours daily, the International Service has developed a liaison with broadcasting organizations in other countries. As a result, an increasing number of programs are relayed over the national networks of many lands, thus assuring an even wider audience for the International Service programs.

Two operations deserve special mention—the Canadian Forces Broadcast Services and the Music Transcription Service.

The International Service, in co-operation with the National Service of the CBC and the Department of National Defence provides a regular program service on tape amounting to 180 hours of material each week. This tape service is made available to Canadian Armed Forces radio stations in Korea, Japan, England, France and Germany. It also goes to Royal Canadian Navy ships operating in the North Atlantic and in Far Eastern waters. A regular tape program service is also provided to National Defence radio stations in the Yukon and Northwest Territories and in Labrador, N'f'ld. News and news features are transmitted daily in both English and French by shortwave through Radio Australia to the Far East, to the European theatre and to the northern outposts of Canada; the last-named serves both Armed Services personnel and civilians outside the range of other broadcasting services.

The music transcription service was started several years ago and now features over 100 programs of 15- and 30-minutes duration. It covers a wide range of material from classical to popular music, including Canadian folk songs. This music transcription service on discs is distributed to national radio organizations and to Canadian Missions abroad. It is currently being used in about 85 countries throughout the world.

Domestic Program Service.—During the year ended Mar. 31, 1954, 67,960 programs representing 22,041 hours of broadcasting were presented over the CBC Trans-Canada, Dominion, and French networks. Of the total broadcasting hours, 83·1 p.c. were devoted to non-commercial and public service programs and the remainder to commercial presentations. Of the total broadcasting hours in 1953-54, 64·7 p.c. was scheduled on the Trans-Canada network; the Dominion network released 9·1 p.c. and the remainder was released on the French network.

The CBC originated and produced 89 p.c. of its network broadcasts. Of the remainder, 1·6 p.c. came from private stations and 9·4 p.c. were exchange programs from the United States and the British Broadcasting Corporation. Various categories of light music made up the greatest number of broadcast hours, followed in order by drama and feature, news, classical music, talks, variety, agricultural programs, women's programs, semi-classical music, educational broadcasts, children's programs, religious periods, dance music, sports programs, old-time music, symphony music, band music, sacred music, prose and poetry, and opera. Table **6** shows the proportion of time devoted to sustaining programs as compared with commercial programs in radio and analyses those made up of music as compared with the spoken word. The figures are based on the number of programs presented on the CBC's three radio networks as live programs, recorded programs, or programs that were recorded earlier for later presentation. They do not include any program that was repeated to any section of the networks. Actually, there were 11,447 programs representing 4,304 hours repeated at various times and to various sections of the networks. In this way, the figures in Table **6** differ from those presented in previous editions of the Canada Year Book.

6.—Classification of CBC Radio Programs, Year Ended Mar. 31, 1954

NOTE.—Dashes in this table indicate that no programs were reported under these particular items. Figures do not include any program repeated to any section of CBC networks. *See* text immediately preceding.

Class of Program	Sustaining			Commercial		
	Programs	Time	P.C. of Total Hours	Programs	Time	P.C. of Total Hours
	No.	hrs. mins.		No.	hrs. mins.	
Musical						
Opera	204	205 :25	1·1	36	108 :00	2·9
Symphony	484	420 :25	2·3	73	71 :00	1·9
Sacred	620	222 :10	1·2	10	2 :30	0·1
Classical	2,592	1,594 :45	8·7	12	6 :00	0·2
Semi-classical	2,519	1,047 :15	5·7	43	7 :30	0·2
Variety	470	208 :50	1·1	1,822	694 :55	18·6
Light	12,713	4,828 :30	26·4	714	226 :25	6·0
Dance	3,138	1,218 :10	6·7	9	2 :15	0·1
Old-time	800	257 :15	1·4	129	38 :30	1·0
Band	651	194 :25	1·1	15	3 :45	0·1
Totals, Musical	**24,191**	**10,197:10**	**55·7**	**2,863**	**1,160:50**	**31·1**

6.—Classification of CBC Radio Programs, Year Ended Mar. 31, 1954—concluded

Class of Program	Sustaining			Commercial		
	Programs	Time	P.C. of Total Hours	Programs	Time	P.C. of Total Hours
	No.	hrs. mins.		No.	hrs. mins.	
Oral						
Drama and feature	1,101	588:45	3·2	6,241	1,769:55	47·4
Prose and poetry	101	49:45	0·3	4	1:00	[1]
Talks, informative	4,330	1,328:15	7·3	528	133:45	3·6
Educational	1,495	536:30	2·9	13	4:30	0·1
News commentary	363	56:50	0·3	—	—	—
News events	883	265:15	1·5	—	—	—
News résumés	14,480	2,349:55	12·8	616	231:30	6·2
Agriculture	2,850	1,096:25	6·0	—	—	—
Sports events	52	58:10	0·3	177	217:10	5·8
Sports résumés	1,410	280:40	1·5	56	14:15	0·4
Women's	1,644	471:05	2·6	753	160:55	4·3
Children's	1,599	473:10	2·6	130	38:10	1·0
Religious	2,022	547:50	3·0	—	—	—
Stock-market quotations	58	10:50	0·1	—	—	—
Totals, Oral	**32,388**	**8,113:25**	**44·3**	**8,518**	**2,571:10**	**68·9**
Grand Totals	**56,579**	**18,310:35**	**100·0**	**11,381**	**3,732:00**	**100·0**

[1] Less than 0.05 p.c.

Music and Drama.—Music and drama are two of the chief items in the CBC schedules. In the year ended Mar. 31, 1954, music made up approximately one-third of the entire network schedule, and those in the 'drama and feature' category comprised the largest percentage of time among spoken-word programs. High-quality programs of both types are heard frequently at good listening hours. Apart from regular broadcasts by Canadian symphony orchestras, much fine music is presented on 'CBC Wednesday Night'—an evening of serious programming on the Trans-Canada network—and once a week by the CBC Symphony Orchestra. Chamber music by various groups, as well as choral music originating at many Canadian points and recitals by Canadian artists and those of international reputation, are important features of the music schedules. Productions by the CBC Opera Company and by the CBC Light Opera Company are heard throughout the season. During the 1953-54 season the CBC Opera Company presented several full-scale operatic productions for television.

During an average year more than 1,000 plays are produced by the CBC for its radio networks, and hundreds for television. Chief among the English-language radio plays are the *Stage* series broadcast Sunday evenings to a national audience, and the longer dramas on 'CBC Wednesday Night'. 'CBC Wednesday Night' also introduced the radio anthology, an evening of prose, poetry, drama, and music woven about a central theme. In television drama CBC has won approval especially for its 90-minute dramas on Tuesday evenings; in the 1953-54 season, 33 of these were presented. One-third of them were original plays by Canadians, and most of the remainder were adaptations by Canadians.

Finances of the CBC.—Operations for the year ended Mar. 31, 1954, after providing for depreciation and obsolescence, resulted in a surplus of $6,567,862, amounting to $1,283,896 for sound broadcasting and $5,283,966 for television.

In the sound-broadcasting service, revenue from excise tax and broadcasting licence fees fell $393,620 short of the previous year's revenue from broadcasting licence fees and the former receiving licence fees. Commercial revenue for sound broadcasting also declined and operating expenditure increased by $1,241,696. The television service received $11,703,149 in excise tax collections. Commercial revenue for the year was $1,334,766 as compared to $518,380 for the seven-month period that this service was in operation during the 1952-53 fiscal year; expenditures, however, were $4,638,174 higher.

A fourth loan for the television service amounting to $4,750,000 was authorized under Appropriation Act No. 3, 1953, and is to be amortized by 30 semi-annual instalments commencing Jan. 1, 1960.

Capital expenditures during 1952-53 were $1,090,640 for the sound-broadcasting service. The principal expenditures were in connection with the Moncton, N.B., and Verchères, Que., transmitters and the Winnipeg, Man., studios. Assets costing $65,360 were written off during the year. The sum of $3,323,974 was spent by the television service in developing production centres at Halifax, Montreal, Ottawa, Toronto, Winnipeg, and Vancouver.

The CBC operates the International Service on behalf of the Government of Canada and all maintenance and operational costs are borne by the Government. These costs are not considered as chargeable to the CBC because the annual statutory grant and revenue from excise tax and licence fees are used only to serve listeners within Canada. Gross operating expenditure for 1953-54 exceeded those of 1952-53 by $45,235. The value of Crown assets in the custody of the Corporation increased $57,862 during the year after write-offs amounting to $9,004.

7.—Income and Expenditure of the CBC, Year Ended Mar. 31, 1954

Item	Sound		Television		Total	
	$	p.c.	$	p.c.	$	p.c.
Income						
Statutory grant	6,250,000	38·23	—	—	6,250,000	21·25
Excise tax	5,056,745	30·94	11,703,149	89·54	16,759,894	56·97
Commercial broadcasting	2,471,489	15·12	1,334,766	10·21	3,806,255	12·94
Licence fees	274,635	1·68	—	—	274,635	0·93
Miscellaneous	208,207	1·27	32,841	0·25	241,048	0·82
International service	2,085,951	12·76	—	—	2,085,951	7·09
Totals, Net Income	**16,347,027**	**100·00**	**13,070,756**	**100·00**	**29,417,783**	**100·00**
Expenditure						
Programs	7,575,176	50·29	4,128,140	53·02	11,703,316	51·22
Engineering	2,678,847	17·78	1,529,094	19·64	4,207,941	18·42
Station networks	1,599,291	10·62	330,155	4·24	1,929,446	8·44
Administration	861,429	5·72	30,846	0·40	892,275	3·90
Press and information	430,825	2·86	52,252	0·67	483,077	2·11
Commercial	279,212	1·85	31,421	0·40	310,633	1·36
Interest on loans	94,063	0·63	275,488	3·54	369,551	1·62
Depreciation	544,216	3·61	422,409	5·42	966,625	4·23
Supervision (allocated to television)	−986,985	−6·55	986,985	12·67	—	—
International service	1,987,057	13·19	—	—	1,987,057	8·70
Totals, Expenditure	**15,063,131**	**100·00**	**7,786,790**	**100·00**	**22,849,921**	**100·00**
Operating surplus	1,283,896	...	5,283,966	...	6,567,862	...

Section 4.—Privately Owned Radio Broadcasting Stations*

Privately owned (non-government) broadcasting stations began operations during the early 1920's, about 12 years before any other broadcasting service was available in Canada. By 1929, 65 of these stations, operating mainly in non-metropolitan areas, provided regular broadcasting service to Canadian communities. In 1954, such stations numbered 147, with a total wattage of 404,450 in daytime and 377,700 at night. Operating in conjunction with AM stations are 29 FM stations with combined power of 49,985 watts. In addition, there are eight shortwave stations operating in conjunction with AM stations, having a combined wattage of 6,685.

Generally, the privately owned stations are limited in power to 5,000 watts, many operating at 1,000 watts and some at 250 watts. Two non-government stations (CFRB Toronto and CKLW Windsor) have, since 1948, operated at 50,000 watts. Privately owned stations serve, primarily, the localities in which they are situated, the nature of the "community" served varying with circumstances. Many such stations are located in relatively small urban centres. Here, however, they serve not only the urban centre population but a larger population located in surrounding rural areas. Others serve medium-sized and metropolitan cities and, in addition, the population of cities or towns adjacent to the centre in which the station is located together with rural audiences in districts between or beyond the urban areas.

Privately owned stations have a combined capital investment currently estimated at approximately $40,000,000, employ more than 5,000 persons, and disburse in salaries and wages an estimated $11,000,000 annually. Revenue is obtained entirely from commercial advertising and these stations receive no part of the special 15-p.c. excise tax charged against the purchase of receivers and parts. The privately owned stations are required to pay transmitter licence fees to the Canadian Broadcasting Corporation; these totalled approximately $245,300 in the year ended Mar. 31, 1954.

Recent years have shown a marked increase in the interest taken in broadcasting by commercial, political and legal interests, since it has become more generally recognized that broadcasting is a form of publication and a basic means of mass communication in North America. A review of this development may be found in Minute Book No. 5 of the 1951 Special Committee on Radio Broadcasting, Nov. 28, 1951, and in Minute Book No. 9 of the 1953 Special Committee, Apr. 29, 1953.

According to figures submitted to the Royal Commission on National Development in the Arts, Letters and Sciences in April 1950, the privately owned stations showed a net profit of 9 p.c. in 1948, figured as a percentage of capital, as against 7 p.c. in 1947 and 8 p.c. in 1946. The 1948 profit, as a percentage of operating revenue, was 10 p.c. as against 8 p.c. in 1947 and 10 p.c. in 1946. These figures are based on reports obtained by the Department of Transport from 109 stations in 1948, 108 stations in 1947, and 88 stations in 1946. Thus, the average net profit per station was $12,516 in 1948, $8,597 in 1947 and $11,228 in 1946. Of the 109 stations reporting in 1948, 79 showed an aggregate surplus and the remainder an aggregate loss. Though no official compilations have been prepared since that time, unofficial estimates indicate that the 1954 position was relatively the same in terms of percentages.

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* Revised by T. J. Allard, Executive Vice-President, Canadian Association of Radio and Television Broadcasters, Ottawa.

Administration.—The non-government stations operate under the Canadian Broadcasting Act, administered by the Canadian Broadcasting Corporation, and under regulations made by the CBC, in addition to the Radio Act administered by the Department of Transport, and regulations made thereunder by that Department. Proof-of-performance statements showing public service, community service and like activities, together with financial statements, must be filed annually with the CBC and the Department of Transport. Regulations limit the amount of advertising that may be carried in any spot announcement or program and the number of announcements that may be carried in any given period of time. Program schedules must be approved in advance by the CBC and food, drug and medicine copy must be approved by the Department of National Health and Welfare.

Licences of the privately owned stations, valid for five years but subject to cancellation at any time during that period, are granted by the Government of Canada upon recommendation of the Board of Governors of the Canadian Broadcasting Corporation. The sale or transfer of any stock or shares held in any broadcasting station must be approved by the Government of Canada after review by the CBC.

Network Operations.—Network operation in Canada is at present restricted to the CBC in both AM and television fields. The CBC also has sole right—except for four private stations—to bring in commercial and other network programs from the United States. Many privately owned stations, however, serve as outlets—either basic or supplementary—for CBC network programs. Under the Broadcasting Act any station may be required to carry any program designated by the CBC.

Television.—At the end of May 1954, there were 17 non-government television stations licensed in Canada, located at Sydney, N.S., Saint John, N.B., Rimouski, Quebec City and Sherbrooke, Que., Kingston, Peterborough, Hamilton, Kitchener, London, Windsor, Sudbury, and Port Arthur, Ont., Regina and Saskatoon, Sask., and Calgary and Edmonton, Alta. Five applications for such licences were pending at that date. The same terms of licence and regulations applying to AM broadcasting apply also to television broadcasting, with the additional requirement that the television broadcaster must carry a minimum of 10·5 hours weekly of CBC-produced material.

The present policy of the Government permits the licensing of one non-government television broadcasting station in any area of Canada, other than Toronto, Montreal, Ottawa, Vancouver, Winnipeg, and Halifax. These major areas are reserved exclusively for television broadcasting stations owned and operated by the Canadian Broadcasting Corporation.

PART IV.—THE POST OFFICE

The Canada Post Office Department was created at the time of Confederation in 1867 by the Canada Post Office Act to superintend and manage the postal service of Canada under the direction of a Postmaster General. For almost a century prior to Confederation, postal services in the Canadian provinces had been controlled by the British Postmaster General and administered by his deputies. Under the French régime a courier service had been organized as early as 1703 between

Quebec, Three Rivers and Montreal; in 1734 a post road was constructed over the same route and post houses, complete with post horses and vehicles, were established for the use of travellers. In 1851, the control of their post offices was assumed by the different provinces of British North America and at Confederation these systems merged to form the Canada Post Office.

Functions.—The basic task of the Canadian Postal Service is the handling and transmission of postal matter—letters, parcels, newspapers, magazines, etc.—and in discharging this duty it maintains a wide variety of services—post offices and air, railway, land and water transportation facilities.

This basic task involves many associated functions which include the sale of postage stamps and other articles of postage; the furnishing of information to the public respecting postage rates and other postal matters; the registration of letters and other articles of mail; the insuring of parcels; the acceptance of C.O.D. articles for mail and dispatch; the sorting, making up and dispatching of ordinary and registered mail to other offices; the sorting and delivery of incoming mail of all kinds; and the transaction of money-order and Post Office Savings Bank business.

All functions of the Postal Service, as far as the public is concerned, are centred in the post offices, of which 12,202 were in operation at Mar. 31, 1954, as against 12,259 at the same date in 1953. Postage paid in 1953-54 by means of postage stamps amounted to $64,546,067 ($67,182,548 in 1953). Post-office money orders are issued for any amount up to and including $100 at more than 7,000 post offices, for payment in almost every country in the world as well as in Canada. Orders payable in Canada only, for amounts under $16, are issued at more than 4,000 additional post offices. Post Office Savings Banks are in operation in all parts of the country and, on Mar. 31, 1954, had total deposits of $37,792,914.

Post offices are established for the transaction of all kinds of postal business wherever the population warrants. The post office is a complete entity in rural districts and smaller urban centres. In the larger towns and cities there is a main post office and, if size of population calls for extra services, postal stations and sub-post offices are operated. Letter-carrier delivery is given in 130 cities and towns by over 5,300 uniformed letter carriers.

Postal stations are maintained on the same lines as the main post offices and perform full postal business, including general-delivery service and a post-office lock-box delivery as well as letter-carrier delivery service accommodating the surrounding district.

Because of its widespread facilities, it has been found expedient for the Post Office to assist other Government Departments in the performance of certain tasks that include the sale of unemployment insurance stamps, the collection of Government annuity payments, the distribution of income-tax forms, Civil Service application forms and the display of Government posters.

Organization.—The Canada Post Office is divided into two parts: the Operating Service and Headquarters at Ottawa. The Operating Service is organized into five regions each under a Regional Director, who is the field representative of the Deputy Postmaster General. There are five Headquarters Branches, viz., Administration, Operations, Transportation, Financial, and Personnel, each under a Director.

Operating and secretarial features in the operating field affecting the post offices and local mail services in urban centres are taken care of by the local Postmaster. District office functions relating to services in the district, and all inspections and investigations, are under District Directors of Postal Services in strategic centres across the country.

Postal service is provided in Canada from Newfoundland to the west coast of Vancouver Island and from Pelee Island, Ont. (the most southerly inhabited point of Canada), to settlements and missions far within the Arctic.

Canada's air-mail system provides several transcontinental flights daily and constitutes a great air artery from St. John's, N'f'ld., to Victoria, B.C., intersected by branch lines and connecting lines radiating to every quarter and linking up with the United States air-mail system. Since July 1, 1948, all first-class domestic mail up to and including one ounce in weight has been carried by air between one Canadian point and another, whenever delivery can thus be expedited. On Apr. 1, 1954, this service was extended to first-class items up to and including eight ounces in weight. Air-stage service provides the sole means of communication with the outside for many areas in the hinterland. There were approximately 29,640 miles of air-mail and air-stage routes in Canada in 1954 as compared with 29,500 miles in 1953.

The principal means of mail transportation is the railway mail service which operates along about 40,000 miles of track and, in 1954, covered over 47,000,000 track miles. The railway mail service employed a staff of 1,317 mail clerks in 1954. This staff prepares the mails for prompt delivery and dispatch while *en route* in the railway mail cars. Like its air-mail service, Canada's railway mail service is one of the most extensive in the world.

The rural mail delivery organization provides direct postal facilities to residents in the rural sections of the country: approximately 5,280 rural mail routes were in operation in 1954, involving about 125,000 route miles and serving 424,000 rural mail boxes. Rural mail routes are generally circular in pattern and average about 24 miles in length. About 4,300 side services were in operation in 1954 to transport mail between post offices, railway stations, steamer wharves, and airports, and 2,993 stage services operated to convey mail to and from post offices not located on railway lines. In 1954, there were approximately 750 city mail services, transporting mail to and from post offices, postal stations and sub-post offices, collecting mail from street letter-boxes and delivering parcel post. In all, about 13,000 land mail service couriers are employed and travel in the neighbourhood of 50,000,000 miles annually. Land mail services are performed under a contract system, the contracts being awarded to the person submitting the lowest tender and competent to provide all the requisite equipment.

The increase in postal business is one of the impressive features of Canada's economic development during the past ten years. From $59,175,138 in 1943, gross revenue has increased year by year to $129,889,325 by Mar. 31, 1954, an all-time high.

Section 1.—Post Office Statistics

Tables 1, 2 and 3 give the numbers of post offices in operation together with revenue and expenditure for the past few years.

1.—Post Offices in Operation, by Province, as at Mar. 31, 1951-54

Province or Territory	1951	1952	1953	1954
	No.	No.	No.	No.
Newfoundland	573	592	606	613
Prince Edward Island	105	105	105	106
Nova Scotia	1,278	1,245	1,215	1,179
New Brunswick	874	837	834	817
Quebec	2,545	2,530	2,516	2,507
Ontario	2,602	2,598	2,613	2,630
Manitoba	823	823	831	824
Saskatchewan	1,407	1,397	1,384	1,364
Alberta	1,179	1,179	1,156	1,152
British Columbia	958	955	955	963
Yukon Territory	15	13	13	15
Northwest Territories	31	31	31	32
Canada	**12,390**	**12,305**	**12,259**	**12,202**

2.—Revenue and Expenditure of the Post Office Department, Years Ended Mar. 31, 1945-54

NOTE.—Figures from 1868 will be found in the corresponding table of previous Year Books beginning with the 1911 edition. Figures for Newfoundland are included from 1950.

Year	Gross Revenue	Net Revenue[1]	Expenditure[2]	Surplus (+) or Deficit (−)
	$	$	$	$
1945	79,533,903	66,071,815	54,629,281	+11,442,534
1946	83,763,007	68,635,559	57,729,646	+10,905,913
1947	86,400,951	72,986,624	64,213,050	+8,773,574
1948	91,613,618	77,770,967	67,943,476	+9,827,491
1949	95,957,469	80,618,401	77,642,621	+2,975,780
1950	101,277,435	84,528,655	82,639,741	+1,888,914
1951	105,545,456	90,454,678	91,781,466	−1,326,788
1952	122,266,675	104,622,208	97,973,263	+6,648,945
1953	129,388,365	112,024,245	105,553,191	+6,471,054
1954	129,889,325	111,107,484	113,581,752	−2,474,268

[1] Gross revenue less commissions and allowances to postmasters and other smaller items. [2] Excludes rental of service staff and staff post offices.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954

NOTE.—Money order commissions are not included in gross postal revenue. Provincial totals of postal revenue include post offices not separately listed.

Province and Post Office	1953	1954
	$	$
Newfoundland		
Botwood	10,131	11,175
Buchans	10,694	10,055
Channel	10,431	10,129
Corner Brook	71,883	76,769
Gander	36,092	38,154
Goose Airport	25,192	24,230
Goose Airport Sub-Office A	10,677	20,476
Newfoundland—concl.		
Grand Falls	25,305	24,296
Harmon Field	10,859	18,098
St. John's	607,597	608,520
Wabana	15,245	16,698
Totals, Newfoundland	**1,263,414**	**1,309,380**

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954—continued

Province and Post Office	1953	1954
	$	$
P. E. Island		
Charlottetown	212,805	207,979
Montague	11,328	11,369
Summerside	70,335	58,999
Totals, P.E. Island	**424,442**	**407,820**
Nova Scotia		
Amherst	76,779	76,941
Annapolis Royal	13,886	14,008
Antigonish	48,723	50,274
Armdale	21,345	[1]
Bedford	11,978	12,472
Berwick	11,582	11,685
Bridgetown	16,825	16,996
Bridgewater	43,972	46,281
Chester	10,929	10,769
Cornwallis	17,473	16,553
Digby	29,119	27,825
Glace Bay	65,683	66,005
Halifax	2,031,385	1,999,536
Hantsport	10,439	[2]
Inverness	10,720	10,592
Kentville	64,234	64,641
Kingston	20,619	12,366
Liverpool	32,102	32,773
Lunenburg	26,361	26,862
Middleton	24,421	23,859
Mulgrave	[2]	10,075
New Glasgow	95,137	94,000
New Waterford	23,815	25,082
North Sydney	38,227	37,922
Parrsboro	12,504	12,531
Pictou	26,519	25,339
Shelburne	16,616	17,057
Springhill	24,562	23,224
Stellarton	24,997	24,958
Sydney	228,123	226,364
Sydney Mines	21,094	21,396
Truro	145,428	146,675
Westville	11,647	11,633
Windsor	35,532	35,598
Wolfville	27,320	27,647
Yarmouth	68,406	69,470
Totals, Nova Scotia	**4,149,099**	**4,095,054**
New Brunswick		
Bathurst	47,089	48,341
Campbellton	59,936	59,996
Chatham	31,466	28,047
Dalhousie	22,945	22,779
Edmundston	52,218	51,319
Fredericton	286,565	284,499
Grand Falls	21,538	21,942
Hartland	11,727	10,787
Harvey Station	11,300	12,019
Moncton	1,225,258	1,182,501
Newcastle	35,547	33,725
Perth	10,476	[2]
Plaster Rock	10,942	10,685
Saint John	711,109	687,393
St. Andrews	23,485	20,328
St. George	10,521	[2]
St. Stephen	38,812	41,924
New Brunswick—concl.		
Sackville	45,226	44,099
Shediac	11,582	11,496
Sussex	31,547	30,051
Woodstock	41,600	43,311
Totals, New Brunswick	**3,335,647**	**3,242,025**
Quebec		
Acton Vale	12,172	11,408
Amos	41,873	38,986
Amqui	19,097	19,490
Arvida	43,081	42,591
Asbestos	30,199	30,831
Aylmer East	10,778	11,217
Bagotville	18,675	14,847
Baie Comeau	32,622	28,212
Baie St. Paul	12,242	11,193
Basilique Ste. Anne	40,738	44,817
Beauceville East	15,689	16,043
Beauharnois	27,527	27,632
Bedford	17,454	17,855
Berthierville	17,037	16,311
Bourlamaque	14,116	14,503
Brownsburg	11,418	10,247
Buckingham	24,160	23,782
Cabano	[2]	10,084
Cap de la Madeleine	75,302	76,220
Chambly	12,997	13,247
Chandler	18,199	19,949
Chicoutimi	167,465	169,913
Coaticook	25,648	25,474
Cookshire	10,036	10,121
Cowansville	34,348	37,844
Danville	13,013	12,692
Dolbeau	25,115	24,033
Donnacona	13,159	12,381
Dorion-Vaudreuil	14,652	15,672
Drummondville	136,067	145,785
East Angus	12,976	13,158
Farnham	29,839	27,364
Forestville	[2]	13,809
Gardenvale	81,576	176,609
Gaspe	26,201	27,037
Gatineau	22,595	22,455
Granby	152,090	156,060
Grand'Mère	47,042	44,599
Hull	139,933	140,345
Huntingdon	23,874	21,204
Iberville	18,689	[3]
Joliette	89,318	88,193
Jonquière-Kenogami	76,397	72,596
Knowlton	11,611	10,561
Lachute	30,498	28,528
Lachute Mills	11,948	[2]
Lac Mégantic	30,792	28,443
Lacolle	14,048	14,403
La Malbaie	20,830	16,083
Laprairie	11,577	11,822
La Sarre	26,867	26,841
L'Assomption	14,140	11,981
La Tuque	41,028	39,120
Lennoxville	28,166	26,411
Lévis	131,651	134,666
Loretteville	15,154	14,073
Louiseville	15,458	15,737
Magog	48,758	48,848
Malartic	24,508	22,053

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[1] Included in Halifax. [2] Less than $10,000. [3] Included in St. Jean.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954—continued

Province and Post Office	1953	1954
	$	$
Quebec—continued		
Maniwaki	22,356	21,332
Marieville	15,036	13,502
Matane	39,629	38,519
Mont Joli	34,056	32,800
Mont Laurier	27,758	26,869
Montmagny	40,867	39,750
Montmorency	11,152	[1]
Montreal	16,719,623	16,970,215
Neuville	23,359	21,417
New Carlisle	14,113	14,785
Nicolet	42,438	56,354
Noranda	62,290	52,229
Parent	11,169	[2]
Plessisville	21,415	20,340
Plessisville Station	13,696	12,243
Port Alfred	14,980	13,429
Princeville	10,874	10,870
Quebec	2,645,036	2,650,065
Rawdon	10,891	10,091
RCAF. Station (St. Hubert)	[3]	15,882
Richmond	20,573	20,884
Rigaud	10,465	[2]
Rimouski	115,150	119,022
Rivière-du-Loup	51,442	60,747
Roberval	31,522	33,089
Rock Island	30,170	30,368
Rouyn	69,196	60,886
Ste. Agathe-des-Monts	38,745	38,428
Ste. Anne-de-Beaupré	12,744	18,111
Ste. Anne-de-Bellevue	20,710	19,884
Ste. Anne-de-la-Pocatière	17,171	17,504
St. Eustache	14,805	14,501
St. Félicien	19,085	15,821
St. Gabriel-de-Brandon	11,633	11,715
St. Georges-Ouest	10,138	[2]
St. Hubert	14,891	[2]
St. Hyacinthe	138,890	137,364
St. Jean	125,189	142,690
St. Jean-Port-Joli	10,537	[2]
St. Jérôme	71,395	74,224
St. Joseph-d'Alma	39,439	31,227
St. Joseph-de-Beauce	12,808	12,824
St. Jovite	10,381	10,060
Ste. Marie-Beauce	22,434	22,551
St. Pascal	12,719	12,484
St. Raymond	13,435	13,168
Ste. Rose	14,663	14,951
Ste. Thérèse-de-Blainville	37,555	35,830
St. Tite	12,304	11,972
St. Vincent-de-Paul	11,052	[4]
Senneterre	14,541	12,890
Seven Islands	47,625	42,410
Shawinigan Falls	115,230	112,496
Shawville	12,489	11,551
Sherbrooke	428,623	429,093
Sorel	72,233	76,688
Sutton	11,642	10,706
Terrebonne	16,982	15,309
Thetford Mines	75,872	78,483
Three Rivers	276,687	300,385
Timiskaming Station	14,854	14,080
Trois Pistoles	17,061	16,729
Val d'Or	64,048	59,054
Valleyfield	75,929	79,260
Victoriaville	74,603	75,931
Ville-Marie	11,107	10,135
Ville St. Georges	28,011	25,646
Warwick	10,914	10,915
Quebec—concluded		
Waterloo	25,806	25,217
Windsor	12,868	12,600
Totals, Quebec	**27,218,926**	**27,392,476**
Ontario		
Acton	22,342	22,189
Agincourt	14,706	14,061
Ajax	28,665	31,323
Aldershot	10,082	[2]
Alexandria	16,101	15,531
Alliston	15,986	16,473
Almonte	15,989	15,832
Amherstburg	29,595	28,703
Ancaster	10,497	11,223
Ansonville	[2]	10,213
Arnprior	35,284	37,724
Atikokan	17,084	21,227
Aurora	36,030	33,142
Aylmer West	39,697	33,233
Bancroft	16,335	16,404
Barrie	133,624	133,330
Bartonville	[2]	10,135
Batawa	20,150	17,617
Beamsville	21,537	20,606
Beaverton	10,975	11,043
Belleville	227,934	229,242
Beverley Hills	[2]	13,729
Billings Bridge (Ottawa)	13,824	11,885
Blenheim	27,792	27,393
Blind River	14,217	13,763
Bowmanville	42,637	43,671
Bracebridge	33,676	32,150
Bradford	16,852	16,151
Brampton	106,108	106,983
Brantford	433,187	428,161
Brighton	16,201	15,611
Brockville	133,555	138,297
Burks Falls	10,173	10,321
Burlington	85,166	83,582
Caledonia	14,159	13,627
Campbellford	23,434	23,329
Camp Borden	29,447	27,334
Crystal Beach	[2]	10,247
Capreol	10,332	[2]
Cardinal	13,411	13,642
Carleton Place	30,017	29,150
Chalk River	10,879	11,636
Chapleau	23,450	22,739
Chatham	253,419	245,421
Chesley	14,032	13,240
Chesterville	10,608	[2]
Chippawa	12,183	12,993
Clarkson	10,479	11,455
Cliffcrest	13,600	[5]
Clinton	30,243	24,941
Cobalt	18,099	16,075
Cobourg	68,829	71,908
Cochrane	33,144	31,065
Collingwood	46,522	45,453
Cooksville	29,317	32,065
Copper Cliff	32,195	26,186
Cornwall	169,819	165,277
Deep River	15,407	15,327
Delhi	27,383	26,970
Downsview	[2]	13,618
Dresden	15,906	15,360

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[1] Included in Quebec. [2] Less than $10,000. [3] Opened May 5. [4] Included in Montreal. [5] Included in Toronto.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954—continued

Province and Post Office	1953	1954
	$	$
Ontario—continued		
Dryden	34,352	30,769
Dundas	55,053	51,899
Dunnville	45,580	42,524
Durham	15,165	14,027
Eganville	14,474	14,512
Elmira	21,035	20,160
Elora	11,229	11,368
Englehart	13,083	11,965
Espanola	19,572	19,065
Essex	26,560	26,298
Exeter	20,647	19,799
Fenelon Falls	12,626	12,979
Fergus	38,018	37,996
Fonthill	[1]	10,004
Forest	16,191	15,739
Fort Erie	86,645	97,519
Fort Frances	56,341	53,349
Fort William	306,788	300,407
Galt	191,892	183,460
Gananoque	42,145	40,925
Georgetown	70,862	70,673
Geraldton	23,520	21,033
Goderich	39,490	38,791
Gore Bay	10,571	10,307
Gravenhurst	29,664	28,404
Grimsby	35,318	34,454
Guelph	277,365	289,791
Hagersville	19,674	18,826
Haileybury	20,595	20,040
Haliburton	13,093	12,360
Hamilton	2,148,929	2,090,903
Hanover	30,332	30,505
Harriston	13,687	12,093
Harrow	18,509	17,724
Hawkesbury	28,897	28,080
Hearst	24,430	21,798
Hespeler	25,274	26,100
Highland Creek	10,795	11,470
Hornepayne	10,572	[1]
Huntsville	46,284	45,971
Ingersoll	48,606	46,660
Iroquois	10,360	[1]
Iroquois Falls	13,489	11,842
Jamestown	13,514	13,844
Kapuskasing	40,562	40,276
Kemptville	17,006	18,207
Kenora	78,446	73,387
Kincardine	21,476	20,972
Kingston	393,685	391,497
Kingsville	28,697	26,146
Kirkland Lake	99,916	93,818
Kitchener	497,227	502,491
Lakefield	14,379	13,752
Lakeview	17,048	[2]
Lambeth	12,545	13,644
Leamington	73,658	73,573
Lindsay	87,513	89,122
Listowel	27,342	25,888
Little Current	14,756	14,062
London	1,614,550	1,613,913
Lucknow	10,057	[1]
Madoc	12,602	12,271
Malton	27,817	26,710
Maple	11,092	10,303
Marathon	16,651	14,055
Markham	12,400	13,283
Matheson	10,679	[1]
Mattawa	14,856	13,561
Meaford	23,992	23,932
Midland	50,861	50,884
Milton West	26,638	28,372
Minden	10,154	10,606
Mitchell	13,068	12,260
Morrisburg	15,725	15,892
Mount Forest	18,358	17,544
Napanee	37,442	35,525
New Hamburg	13,314	14,209
New Liskeard	65,474	65,352
Newmarket	51,849	52,552
Newton Brook	16,179	18,306
Niagara Falls	427,684	433,567
Niagara-on-the-Lake	38,181	49,939
Nipigon	12,908	14,055
North Bay	195,429	197,842
Norwich	12,955	12,613
Oakville	123,916	148,032
Orangeville	31,218	30,725
Orillia	120,877	119,798
Oshawa	478,646	522,884
Ottawa	2,641,906	2,501,549
Owen Sound	173,386	159,248
Palmerston	12,888	12,056
Paris	44,000	70,401
Parry Sound	43,795	41,578
Pembroke	92,016	91,670
Penetanguishene	18,785	19,531
Perth	50,530	49,407
Petawawa Camp	17,156	16,983
RCAF Station Borden	10.377	12,416
RCAF Station Clinton	[1]	11,155
RCAF Station Rockcliffe, Ottawa	11,547	16,907
RCAF Station Trenton	30,272	32,660
Peterborough	368,775	356,749
Petrolia	19,960	18,973
Pickering	13,026	13,656
Picton	53,115	52,301
Point Edward	13,557	14,500
Port Arthur	257,218	257,584
Port Colborne	75,698	72,091
Port Credit	61,625	90,398
Port Dalhousie	16,726	16,404
Port Dover	19,301	18,802
Port Elgin	13,800	13,400
Port Hope	61,406	63,878
Port Perry	12,914	12,667
Prescott	33,274	35,247
Preston	73,257	74,527
Rainy River	10,434	[1]
Red Lake	13,499	11,029
Renfrew	55,443	55,665
Richmond Hill	23,411	24,343
Ridgetown	18,513	18,146
Ridgeway	13,204	12,646
Rodney	10,218	[1]
St. Catharines	409,174	417,293
St. Mary's	33,007	31,829
St. Thomas	175,747	174,863
Sarnia	258,933	265,403
Sault Ste. Marie	241,702	229,378
Scarborough Bluffs	21,036	[3]
Scarborough Junction	11,252	10,397
Schreiber	10,372	[1]
Schumacher	19,136	15,284
Seaforth	19,632	19,452
Shelburne	11,677	11,671
Simcoe	97,086	91,630
Sioux Lookout	24,562	23,440
Smiths Falls	58,711	58,055
Smooth Rock Falls	11,153	10,735

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[1] Less than $10,000. [2] Included with Port Credit. [3] Included with Toronto.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954—continued

Province and Post Office	1953	1954
	$	$
Ontario—concl.		
Southampton	12,100	11,322
South Porcupine	25,876	23,093
Stayner	11,308	11,250
Stoney Creek	19,726	21,917
Stouffville	16,275	16,570
Stratford	163,895	164,807
Strathroy	32,294	33,043
Streetsville	18,056	17,354
Sturgeon Falls	21,916	20,907
Sudbury	371,172	372,834
Tecumseh	13,689	12,505
Thamesville	11,403	10,482
Thessalon	12,346	11,142
Thornhill	11,562	12,979
Thorold	64,587	63,645
Tilbury	22,898	22,153
Tillsonburg	51,893	50,552
Timmins	150,480	131,871
Toronto	25,065,689	25,592,718
Trenton	72,643	70,130
Tweed	17,512	17,135
Uxbridge	16,437	16,590
Walkerton	27,350	29,488
Wallaceburg	63,899	56,245
Waterdown	10,506	11,287
Waterford	14,026	12,800
Waterloo	180,442	187,835
Watford	12,387	12,268
Welland	193,310	190,070
Westboro (Ottawa)	31,915	55,159
West Hill	15,933	14,693
Whitby	37,248	37,277
Wiarton	15,196	14,707
Willowdale	114,576	143,302
Winchester	12,994	13,040
Windsor	1,306,839	1,279,143
Wingham	23,599	24,451
Woodbridge	14,604	15,291
Woodstock	162,622	161,400
Totals, Ontario	**48,823,629**	**49,225,014**
Manitoba		
Altona	13,679	12,763
Beauséjour	13,192	12,910
Boissevain	12,101	11,050
Brandon	229,612	220,793
Carman	17,688	17,081
Dauphin	56,875	61,514
Flin Flon	55,952	55,486
Fort Churchill	12,042	12,100
Gimli	15,588	10,011
Killarney	12,843	12,343
Minnedosa	18,808	18,042
Morden	15,263	15,142
Morris	10,606	[1]
Neepawa	28,000	27,134
Pine Falls	13,204	11,466
Portage la Prairie	85,278	85,959
Roblin	13,397	13,098
Russell	12,782	11,388
Selkirk	31,055	29,590
Sifton	10,502	16,898
Souris	13,556	13,738
Steinbach	17,767	19,133
Swan River	25,200	23,232
The Pas	27,620	26,197
Manitoba—concl.		
Transcona	17,986	17,844
Virden	20,576	21,610
Wawanesa	11,676	10,619
Winkler	11,615	11,374
Winnipeg	6,810,638	6,772,267
Totals, Manitoba	**8,483,456**	**8,366,374**
Saskatchewan		
Assiniboia	24,724	23,231
Biggar	17,307	16,881
Broadview	11,251	10,192
Canora	17,166	16,640
Carlyle	10,844	10,107
Estevan	35,946	38,406
Eston	12,766	11,363
Foam Lake	11,178	10,833
Fort San	10,043	[1]
Gravelbourg	14,006	13,969
Grenfell	10,642	[1]
Hudson Bay	12,087	10,703
Humboldt	30,349	29,368
Indian Head	14,686	14,116
Kamsack	17,891	16,843
Kerrobert	11,416	11,071
Kindersley	20,975	20,439
Lloydminster	49,502	47,987
Maple Creek	20,050	19,744
Meadow Lake	17,572	17,342
Melfort	36,685	35,223
Melville	34,566	32,405
Moose Jaw	239,703	238,400
Moosomin	15,955	15,995
Nipawin	24,897	23,045
North Battleford	95,307	94,063
Outlook	10,277	[1]
Prince Albert	173,170	173,028
Regina	2,118,312	2,198,493
Rosetown	24,185	23,412
Rosthern	13,842	13,613
Saskatoon	856,356	848,353
Shaunavon	20,513	20,780
Shellbrook	10,864	[1]
Swift Current	88,199	90,552
Tisdale	31,045	27,190
Unity	17,371	16,111
Uranium City	[1]	12,298
Wadena	15,388	14,498
Watrous	11,855	11,544
Weyburn	53,598	52,012
Wilkie	16,622	16,063
Wynyard	13,276	12,940
Yorkton	97,084	94,911
Totals, Saskatchewan	**6,106,509**	**6,042,582**
Alberta		
Athabasca	13,130	12,743
Banff	53,821	59,117
Barrhead	16,086	15,130
Beaverlodge	[1]	10,087
Blairmore	15,220	13,895
Bonnyville	13,119	13,513
Bowden	12,013	11,507

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[1] Less than $10,000.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954—continued

Province and Post Office	1953	1954
	$	$
Alberta—concl.		
Bowness	[1]	12,373
Brooks	26,742	24,336
Calgary	2,101,012	2,070,924
Camrose	52,571	50,607
Cardston	20,644	18,173
Claresholm	26,405	26,713
Coaldale	10,470	10,935
Coleman	17,549	14,410
Devon	[1]	10,163
Didsbury	14,779	13,568
Drumheller	45,599	43,850
Edmonton	2,517,995	2,566,653
Edson	22,266	24,304
Fairview	13,470	12,439
Fort Macleod	18,313	16,518
Fort Saskatchewan	[1]	11,328
Grande Prairie	50,716	51,589
Hanna	21,119	20,964
High Prairie	14,199	14,058
High River	22,661	19,827
Innisfail	21,118	20,460
Jasper	26,584	24,560
Lacombe	32,514	31,106
Leduc	17,231	15,580
Lethbridge	287,433	291,107
Medicine Hat	128,284	119,905
Nanton	11,358	11,271
North Edmonton	15,511	15,728
Olds	25,066	24,048
Peace River	34,195	31,598
Pincher Creek	17,814	16,534
Ponoka	30,957	30,216
Provost	10,415	[1]
Raymond	14,644	13,792
RCAF Station, Edmonton	14,787	15,853
Red Deer	103,688	108,689
Rocky Mountain House	15,688	14,972
St. Paul	19,079	19,332
Sedgewick	10,125	[1]
Stettler	33,522	33,818
Taber	26,173	24,821
Three Hills	33,595	37,146
Vegreville	22,873	22,491
Vermilion	26,110	24,097
Viking	10,308	10,083
Vulcan	15,483	14,400
Wainwright	27,823	24,764
Westlock	19,499	18,727
Wetaskiwin	39,826	39,403
Totals, Alberta	**7,530,982**	**7,445,433**
British Columbia		
Abbotsford	44,303	41,659
Alberni	21,222	20,820
Aldergrove	12,045	11,854
Armstrong	16,331	15,142
Ashcroft	10,394	[1]
Bralorne	11,429	[1]
Burns Lake	23,140	21,041
Campbell River	32,965	31,779
Castlegar	12,950	13,121
Chemainus	16,729	17,566
Chilliwack	93,885	89,719
British Columbia—concl.		
Cloverdale	39,524	38,582
Comox	[1]	10,051
Courtenay	56,831	55,496
Cranbrook	49,708	46,804
Creston	27,141	24,938
Cumberland	10,249	[1]
Dawson Creek	44,464	48,343
Duncan	72,928	68,264
Enderby	11,714	11,253
Fernie	25,330	23,320
Fort St. John	18,022	17,502
Ganges	11,773	10,590
Gibsons	11,794	11,059
Golden	10,978	10,657
Grand Forks	18,839	17,473
Haney	37,371	36,653
Hope	17,716	17,863
Kamloops	136,046	135,783
Kelowna	137,945	128,658
Kemano	29,613[2]	41,414
Kimberley	39,292	34,414
Kitimat	13,583[3]	27,417
Ladner	27,224	25,545
Ladysmith	19,540	18,022
Lake Cowichan	11,213	10,543
Langley Prairie	41,428	41,881
Merritt	12,054	12,278
Mission City	50,480	51,152
Nanaimo	139,300	130,967
Nelson	117,736	111,080
New Westminster	443,845	427,305
Ocean Falls	21,646	21,345
Oliver	26,412	24,448
Osoyoos	12,635	12,248
Parksville	13,381	12,830
Penticton	106,934	96,816
Port Alberni	69,530	63,893
Port Alice	11,223	[1]
Port Coquitlam	18,026	18,092
Powell River	33,099	28,903
Prince George	105,898	103,873
Prince Rupert	110,643	105,148
Princeton	19,191	17,097
Qualicum Beach	14,699	14,180
Quesnel	47,493	37,128
Revelstoke	30,816	27,153
Rossland	24,315	22,132
Royal Oak	10,020	10,418
Saanichton	12,012	10,780
Salmo	10,188	[1]
Salmon Arm	30,434	28,961
Sardis	14,410	14,290
Sidney	24,562	22,803
Smithers	20,935	20,969
Steveston	15,488	17,542
Terrace	20,421	21,824
Trail	140,764	122,185
Vancouver	6,554,059	6,456,039
Vancouver (AMF)[4]	21,951	23,099
Vanderhoof	13,097	12,307
Vernon	109,175	101,658
Victoria	1,362,365	1,338,923
Victoria HMC Dockyard	23,867	25,435
West Summerland	17,709	16,607
Westview	19,957	16,926
White Rock	28,758	31,379
Williams Lake	23,739	24,699
Totals, British Columbia	**12,078,213**	**11,748,508**

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[1] Less than $10,000.
[2] Opened Apr. 21, 1952.
[3] Opened May 8, 1952.
[4] Air-mail field.

3.—Gross Postal Revenue of Offices collecting upwards of $10,000 for the Years Ended Mar. 31, 1953 and 1954—concluded

Province and Post Office	1953	1954	Province and Post Office	1953	1954
	$	$		$	$
Yukon Territory			**Summary**		
Dawson	16,007	13,683	Newfoundland	1,263,414	1,309,380
Whitehorse	55,307	61,616	Prince Edward Island	424,442	407,820
			Nova Scotia	4,149,099	4,095,054
			New Brunswick	3,335,647	3,242,025
Totals, Yukon Territory	**92,265**	**94,562**	Quebec	27,218,926	27,392,476
			Ontario	48,823,629	49,225,014
			Manitoba	8,483,456	8,366,374
			Saskatchewan	6,106,509	6,042,582
			Alberta	7,530,982	7,445,433
Northwest Territories			British Columbia	12,078,213	11,748,508
			Yukon and N.W.T.	153,605	135,908
Yellowknife	40,511	21,347	**Canada**	**119,567,922**	**119,410,574**
Totals, N.W.T.	**61,340**	**41,346**	P.C. of all Postal Revenue	92·4	91·9

Postage.—The gross revenue receipts shown in Table 2 are received mainly from postage, either in the form of postage stamps and stamped stationery, or postage meter and postage register machine impressions. Some postage is also paid in cash without stamps, stamped stationery or meter and register impressions. The gross value of the postage stamps and stamped stationery sold during each of the latest five fiscal years was: $57,249,306 in 1949-50, $57,178,573 in 1950-51, $65,093,099 in 1951-52, $67,182,548 in 1952-53 and $64,546,067 in 1953-54. Receipts from postage meter or postage register impressions and postage paid in cash by other means were as follows: $36,292,710 in 1949-50, $39,979,297 in 1950-51, $48,945,565 in 1951-52, $52,733,682 in 1952-53 and $55,398,788 in 1953-54.

Section 2.—Auxiliary Postal Services

Auxiliary postal services include the issuing of money orders and the operation of the Post Office Savings Bank.

Table 4 shows the amount of money-order business conducted by the Postal Service in recent years. A table showing the financial business of the Post Office Savings Bank will be found in Chapter XXVI, Currency and Banking.

4.—Operations of the Money-Order System, Years Ended Mar. 31, 1945-54

Note.—Figures from 1868 will be found in the corresponding table of previous Year Books beginning with the 1911 edition.

Year	Money-Order Offices in Canada	Money-Orders Issued in Canada	Value of Orders Issued in Canada	Value Payable in—		Value of Orders Issued in Other Countries, Payable in Canada
				Canada	Other Countries	
	No.	No.	$	$	$	$
1945	7,406	20,742,643	281,890,291	276,704,712	5,185,579	8,467,849
1946	7,377	22,031,756	290,933,503	285,574,174	5,359,329	8,732,635
1947	7,416	25,184,900	329,557,703	321,728,205	7,829,498	9,150,238
1948	7,546	27,705,523	370,232,987	359,633,658	10,599,329	7,722,585
1949	7,614	28,851,065	415,703,754	409,167,635	6,536,119	7,410,014
1950	11,252	38,567,500	479,520,987	473,364,799	6,156,187	6,697,818
1951	11,387	40,415,207	511,915,621	505,935,524	5,980,096	3,920,218
1952	11,320	41,782,109	580,823,622[r]	571,396,122[r]	9,427,500	3,019,522
1953	11,288	43,067,940	623,266,884[r]	606,289,305[r]	16,977,579	4,982,551
1954	11,264	45,797,958	676,080,657	656,515,831	19,564,826	4,763,566

PART V.—THE PRESS

The Canadian Press.—The Canadian Press is the co-operative news-gathering association through which the daily newspapers receive basic world and Canadian (other than local) news reports.

The Canadian news is essentially an exchange between regions, provided by the member papers, edited by CP staffs, transmitted over CP wires and supplemented by direct CP staff reporting, particularly at Ottawa where Parliament is covered directly by CP men for the association's 92 members. World news is obtained from Reuters and the Associated Press, supplemented by a bureau at London, England, and by another at New York, U.S.A., where Canadian editors route AP, Reuters and CP copy into Canada.

Press Statistics.—The following tables are based on data estimated from *Canadian Advertising.* One serious difficulty has been encountered in connection with the compilation of circulation figures. Reliable circulation figures are relatively easy to obtain for daily newspapers because, in their own best interest, such papers qualify for and subscribe to the Audit Bureau of Circulation requirements: for these, A.B.C. 'net paid' figures were used. However, it is difficult to obtain reliable circulation figures for many weekly newspapers that do not subscribe to the Audit Bureau. Here total circulation (paid and free) was taken where such figures were supported by sworn statements or some other reliable record.

In compiling magazine circulation, total net paid figures, as reported by publishers to the Audit Bureau (including bulk sales), were used. Where such figures were not available—and this was rare—publishers' minimum claims or sworn statements were accepted.

Daily Newspapers.—Daily newspapers are published in Canada in three main language groups: English, French, and foreign. French daily newspapers have, as would be expected, a wide circulation in the Province of Quebec and some of the largest of these papers have been established in that Province for over 60 years. Eleven of the 13 French-language newspapers published in 1953 were established in Quebec Province; and one each in the Provinces of Ontario and New Brunswick.

Many of the daily newspapers extend their influence over the rural areas surrounding the cities where they are published. In this respect, they supplement the weekly newspapers which feature essentially local news and serve the smaller cities, towns and rural areas only.

The larger metropolitan dailies, especially those of Montreal, Que., and Toronto, Ont., have built up considerable circulation in areas outside their own cities. This is especially true since rapid freight transport by highway and latterly by air has become more common. Moreover, because they command exclusive feature services that the dailies of the smaller cities cannot afford, they are thus placed in an advantageous position in competition with the local dailies.

*Weekly Newspapers.**—Weekly newspapers circulate within relatively restricted areas around their publication centres. They cater to a limited local interest but, within the areas they serve, exercise an important influence. Canada is well served by foreign-language weekly newspapers; in 1953, these had a stated circulation of 271,831 copies, among which Ukrainian language papers had a circulation of 67,251 copies, German 38,484, Yiddish 28,465, and Polish 24,690 copies.

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* Includes a very few semi- and tri-weekly newspapers.

1.—Estimated Numbers and Circulations[1] of reporting Daily and Weekly[2] English-Language Newspapers, by Province, 1951-53

Note.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Province or Territory	1951				1952				1953			
	Daily		Weekly		Daily		Weekly		Daily		Weekly	
	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
N'f'ld......	2	22,905	8	44,889	3	29,814	5	34,487	3	31,737	4	30,424
P.E.I.......	2	18,713	1	3,541	2	19,044	1	3,541	2	18,852	1	5,611
N.S........	6	205,833	28	80,376	5	142,807	28	79,211	5	145,305	26	75,539
N.B........	3	71,913	16	45,398	3	72,829	16	46,849	3	74,797	16	46,554
Que........	5	260,835	27	429,881	5	273,153	28	316,527	5	278,037	30	335,596
Ont........	37	1,551,490	255	1,416,234	38	1,585,215	252	1,502,168	38	1,579,545	251	1,478,105
Man........	6	180,256	64	69,168	6	181,311	63	86,688	6	191,290	63	89,532
Sask.......	4	90,839	151	149,238	4	90,826	151	162,177	4	93,925	145	156,098
Alta........	5	169,909	111	115,108	5	177,714	113	117,657	5	187,810	102	121,923
B.C........	11	367,723	75	171,827	11	389,188	76	181,623	11	410,310	77	188,197
Yukon and N.W.T...	—	—	3	2,850	—	—	3	3,050	—	—	3	3,450
Canada..	**81**	**2,940,416**	**739**	**2,528,510**	**82**	**2,961,901**	**736**	**2,533,978**	**82**	**3,011,608**	**718**	**2,531,029**

[1] Circulation not reported for all newspapers. [2] Includes bi-weeklies, tri-weeklies and national week-end papers.

2.—Estimated Numbers and Circulations[1] of reporting Daily and Weekly[2] French-Language Newspapers, by Province, 1951-53

Note.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Province	1951				1952				1953			
	Daily		Weekly		Daily		Weekly		Daily		Weekly	
	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
N'f'ld......	—	—	—	—	—	—	—	—	—	—	—	—
P.E.I.......	—	—	—	—	—	—	—	—	—	—	—	—
N.S........	—	—	1	1,435	—	—	1	1,435	—	—	1	1,435
N.B........	1	7,041	1	4,000	1	9,178	1	4,000	1	8,527	1	3,843
Que........	11	581,151	110	1,421,417	10	572,729	118	1,487,131	11	609,370	122	1,568,681
Ont........	1	27,712	3	7,100	1	26,690	4	16,025	1	26,017	5	62,851
Man........	—	—	1	10,447	—	—	1	9,191	—	—	1	9,291
Sask.......	—	—	1	1,302	—	—	1	1,202	—	—	1	1,202
Alta........	—	—	1	3,612	—	—	1	2,700	—	—	1	2,700
Totals....	**13**	**615,904**	**118**	**1,449,313**	**12**	**608,597**	**127**	**1,521,684**	**13**	**643,914**	**132**	**1,650,003**

[1] Circulation not reported for all newspapers. [2] Includes national week-end papers.

3.—Estimated Numbers and Net Paid Circulations of reporting Daily and Weekly English-Language Newspapers published in Urban Centres of 30,000 Population or Over, 1952 and 1953.

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Urban Centre	Census 1951	1952				1953			
	Households	Daily		Weekly		Daily		Weekly	
	No.	No.	Net Paid Circulation	No.	Net Paid Circulation	No.	Net Paid Circulation	No.	Net Paid Circulation
Brantford, Ont.	10,375	1	19,081	—	—	1	19,080	—	—
Calgary, Alta.	37,710	2	78,227	—	—	2	81,799	—	—
Edmonton, Alta.	42,925	1	80,207	3	7,425	1	85,543	2	6,998
Fort William, Ont.	9,300	1	13,322	—	—	1	13,316	—	—
Halifax, N.S.	18,710	1	103,339	—	—	1	104,891	—	—
Hamilton, Ont.	55,340	1	81,225	1	18,250[1]	1	84,249	1	18,000[1]
Kingston, Ont.	8,710	1	17,808	1	40,614[2]	1	18,959	1	38,222[2]
Kitchener, Ont.	11,570	1	27,015	—	—	1	29,203	—	—
London, Ont.	26,385	1	84,200	—	—	1	86,074	—	—
Montreal, Que.	247,485	3	259,969	7	225,372[3]	3	264,665	8	234,477[4]
Oshawa, Ont.	11,225	1	10,903	—	—	1	11,986	—	—
Ottawa, Ont.	48,965	2	117,796	—	—	2	118,917	—	—
Peterborough, Ont.	10,020	1	15,985	1	6,046	1	15,878	1	6,046
Port Arthur, Ont.	8,425	1	11,435	—	—	1	11,353	—	—
Quebec, Que.	34,970	1	5,099	—	—	1	4,971	—	—
Regina, Sask.	19,160	1	42,647	1	2,487	1	43,702	1	2,400
St. Catharines, Ont.	10,380	1	19,731	—	—	1	20,882	—	—
St. John's, N'f'ld.	10,570	2	24,939	2	28,320[5]	2	26,862	2	25,307[5]
Saint John, N.B.	13,180	1	43,339	1	6,300	1	45,062	1	6,300
Sarnia, Ont.	9,380	1	12,196	—	—	1	12,718	—	—
Saskatoon, Sask.	14,980	1	33,623	—	—	1	35,520	—	—
Sault Ste. Marie, Ont.	7,855	1	12,205	—	—	1	13,100	—	—
Sherbrooke, Que.	11,545	1	8,085	1	3,400	1	8,401	1	3,400
Sudbury, Ont.	9,450	1	19,963	—	—	1	21,038	—	—
Sydney, N.S.	6,325	1	26,603	—	—	1	26,603	—	—
Toronto, Ont.	157,175	4	890,237	5	993,442[6]	4	865,048	5	961,123[6]
Three Rivers, Que.	9,530	—	—	1	3,889	—	—	1	3,975
Vancouver, B.C.	101,330	3	312,983	2	7,750	3	332,560	3	12,500
Verdun, Que.	19,805	—	—	2	32,063[7]	—	—	2	33,101[7]
Victoria, B.C.	15,790	2	47,415	1	31,441[8]	2	47,377	1	31,461[8]
Windsor, Ont.	31,815	1	71,438	—	—	1	73,242	—	—
Winnipeg, Man.	64,630	2	169,652	—	—	2	178,923	—	—

[1] Tri-weekly. [2] National week-end. [3] Includes 2 national week-end, 2 bilingual and 1 Saturday editions. [4] Includes 2 national week-end, 3 bilingual and 1 Saturday editions. [5] Includes 1 national week-end. [6] Includes 2 national week-end. [7] Includes 1 bilingual. [8] Sunday edition.

4.—Estimated Numbers and Circulations of reporting Daily and Weekly French-Language Newspapers in Urban Centres of 30,000 Population or Over, 1952 and 1953.

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Urban Centre	Census 1951	1952				1953			
	Households	Daily		Weekly		Daily		Weekly	
	No.	No.	Circulation	No.	Circulation	No.	Circulation	No.	Circulation
Edmonton, Alta.	42,925	—	—	1	2,700	—	—	1	2,700
Hull, Que.	9,325	—	—	2	7,275	—	—	2	7,275
Montreal, Que.	247,485	5	329,412	15	1,084,037[1]	5	345,481	17	1,176,386[2]
Ottawa, Ont.	48,965	1	26,690	—	—	1	26,017	1	46,800[3]
Quebec, Que.	34,970	2	192,845	—	—	2	198,557	—	—
Sherbrooke, Que.	11,545	1	20,448	1	30,775	1	23,853	1	30,775
Sudbury, Ont.	9,450	—	—	1	1,825	—	—	1	1,851
Three Rivers, Que.	9,530	1	25,454	3	10,223	1	27,121	3	13,559
Winnipeg, Man.	64,630	—	—	1	9,191	—	—	1	9,291

[1] Includes 5 bilingual, 5 national week-end, 2 Saturday and 1 Sunday editions. [2] Includes 7 bilingual, 5 national week-end, 2 Saturday and 1 Sunday editions. [3] National week-end.

5.—Estimated Numbers and Circulations of Weekly Foreign-Language Newspapers, 1951-53

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Language	1951[1]		1952[1]		1953[1]	
	No.	Circulation	No.	Circulation	No.	Circulation
Bulgarian	1	1,000	1	1,000	1	1,000
Estonian	1	2,500	2	7,991	2	9,807
Finnish	4	17,200	4	14,691	4	15,206
German	4	30,620	4	32,484	5	38,484
Hungarian	1	3,450	1	2,349	2	8,543
Icelandic	3	13,425	3	13,175	2	8,605
Italian	—	—	2	20,670	2	20,770
Japanese	1	3,400	2	5,453	2	6,900
Latvian	—	—	1	4,000	1	5,180
Lithuanian	1	..	2	4,850[2]	2	4,850[2]
Norwegian	1	4,820	1	4,820	1	4,880
Polish	3	23,656	3	22,372	3	24,690
Russian	—	—	—	—	1	4,020
Slovak	1	3,500	1	3,128	1	3,150
Swedish	3	9,871	2	5,103	2	5,271
Ukrainian	7	62,179	7	62,743	7	67,251
Yiddish	3	28,465	3	28,465	3	28,465
Yugoslav	1	4,768	2	9,088	3	14,759

[1] Includes some bi- and tri-weeklies. [2] Circulation for 1 newspaper only.

Other Publications and Periodicals.—Table 6 shows the number of publications, other than newspapers, published in Canada. Monthly and weekly magazines and periodicals enjoy the largest circulation: those dealing with home, social and welfare, agricultural and rural topics, and religious, trade, industry and related subjects are the most popular.

6.—Estimated Numbers and Circulations of reporting Magazines and Related Publications, by Broad Classifications, 1951-53

NOTE.—Figures from 1945 will be found in the corresponding table of previous Year Books beginning with the 1947 edition.

Classification	1951			1952			1953		
	Listed	Reporting		Listed	Reporting		Listed	Reporting	
	No.	No.	Circulation	No.	No.	Circulation	No.	No.	Circulation
Agricultural and rural	55	52	2,534,970	56	55	2,569,817	57	56	2,588,544
Arts, crafts and professions	19	18	113,399	19	18	117,281	19	18	97,254
Construction	16	16	121,415	18	17	126,232	20	18	132,196
Educational	54	51	438,899	57	54	464,401	62	60	484,002
Finance and insurance	14	7	67,455	14	8	77,642	14	9	104,499
Government and government services	27	24	268,107	25	23	283,990	26	24	291,289
Home, social and welfare	47	44	3,932,209	48	44	4,146,807	45	42	4,039,670
Labour	20	17	235,924	21	17	247,172	20	15	209,783
Pharmaceutical and medical	32	28	116,582	33	30	119,347	32	28	122,221
Religious	35	35	698,207	36	36	743,280	37	37	816,129
Services and directories	61	52	300,282	63	55	367,475	62	55	435,109
Sports and entertainment	26	19	315,580	30	24	320,218	31	23	297,450
Trade, industry and other related publications	171	158	790,155	174	160	791,390	178	167	848,273
Transportation and travel	29	28	235,223	32	31	302,791	31	31	329,030
Miscellaneous	40	39	443,770	39	39	442,101	39	38	439,015
Totals	**646**	**588**	**10,612,177**	**665**	**611**	**11,119,944**	**673**	**621**	**11,234,464**

CHAPTER XXI.—DOMESTIC TRADE

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—THE MOVEMENT AND MARKETING OF COMMODITIES

Domestic trade is broad and complicated: it encompasses all values added to commodities traded, provincially and interprovincially, by agencies and services connected with the storage, distribution and sale of goods, such as railways, steamships, warehouses, wholesale and retail stores, financial institutions, etc. Taken in a wide sense, it embraces various professional and personal services including those directed to the amusement of the people, such as theatres and sports. However, not all phases of this broad field are covered here, though, wherever possible, cross references are given to related material appearing in other Chapters. The arrangement of material in a volume such as the Year Book is governed by the necessity of interpretation from various angles. The Index will be found useful in this respect.

Section 1.—Merchandising and Service Establishments

Subsection 1.—Statistics of the 1951 Census of Distribution*

The 1951 Census of Distribution is the third of its kind taken in Canada. The first complete survey of trading establishments was taken as part of the Census of 1931, and related to business transacted during the calendar year 1930. The results of that Census are contained in Vols. X and XI of the 1931 Census report and constitute the first detailed body of data available regarding the wholesale, retail, and service marketing structure of the country.

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* Prepared in the Decennial Census of Distribution Section, Industry and Merchandising Division of the Dominion Bureau of Statistics.

Results of the second complete Census of Distribution relate to the year 1941, and provide a means of measuring the changes which took place in the marketing structure of Canada during the years 1930-41. These data are contained in Vols. X and XI of the 1941 Census report. The information secured through the 1951 Census of Distribution, reflects the many changes that took place during the great expansion period following World War II. Complete details are contained in Vols. VII and VIII of the 1951 Census report.

Wholesale Trade.—The Census of Distribution bases its survey of wholesale trade on a concept that includes all establishments engaged in trade with customers other than household consumers, provided the establishment is mainly engaged in the resale of goods it originally purchased. Therefore, manufacturing establishments do not fall within this category nor do retailers selling to household consumers, but the definition does include those entrepreneurs who relay goods from the producer direct to retailers for resale, as well as those whose principal trade is with business establishments, and other large non-household consumers, which purchase goods for their own consumption. Contingent upon, or complementary to, these types of operation, are the wholesalers who facilitate this relay of goods, either by bringing buyer and seller together (agents and brokers), or by actually buying the goods for subsequent trading within the wholesale field itself. This results in a considerable volume of trade between the various types of wholesalers, as is shown in Table 1. It follows, therefore, that the sum of the sales of all types of wholesalers overstates the actual value of goods moving out of the wholesale field.

1.—Percentage Distribution of Wholesale Sales, by Major Type of Operation, 1951

Major Type of Operation	Retailers (for Resale)	Industrial and Other Large Users	Other Wholesalers (for Resale)	Household Consumers	Export
	p.c.	p.c.	p.c.	p.c.	p.c.
Wholesalers proper	48·9	32·5	10·5	2·0	6·1
Petroleum, bulk tank stations	31·8	34·4	25·5	6·9	1·4
Assemblers of primary products	15·5	26·9	43·4	2·5	11·7
Manufacturers' sales branches and offices	30·8	37·2	17·3	0·2	14·5
Agents and brokers	12·7	20·8	32·8	0·1	33·6
Other types of operation	82·8	14·6	2·0	0·3	0·3
All Establishments	**34·4**	**31·8**	**19·4**	**1·6**	**12·8**

Wholesale establishments are classified by two criteria: according to the manner in which they conduct business operations (type of operation) and according to the type of goods sold (kind of business). Table **2** presents statistics classified by type of operation, and Table **3** is a compilation by kind-of-business classification. In this connection, establishments were classified individually according to the characteristics of the establishment concerned, and not on a firm basis. As a result, multiple establishments under the same ownership could be classified differently, depending on the operations of each establishment. It is also noteworthy that the classifications have their descriptive limits; consequently, each establishment was classified according to its major characteristics. Thus, it is often true that an establishment assigned to a specific category, e.g., "food", was for the most part engaged in the sale of food, but non-food commodities could have been sold in varying minor proportions.

In 1951, there were 26,167 wholesalers of all types whose aggregate volume of business transacted was $14,401,036,700. The number of establishments increased 5·7 p.c. as compared with 1941, but the dollar volume of business increased about three-fold.

As in 1941, the Provinces of Ontario and Quebec accounted for most of the trade in 1951, but to a lesser degree—65·6 p.c. in 1941 compared with 58·4 p.c. in 1951. The small declines in the proportion of the Canada total accounted for by these two provinces were offset mainly by increases in Manitoba and British Columbia. Most of the total sales volume originated in the larger cities; 79·1 p.c. in cities of 30,000 population or over and 58·4 p.c. in the four largest Canadian cities—Montreal, Toronto, Winnipeg and Vancouver.

By kind of business, wholesalers proper were most active in groceries and food specialties, where sales of $883,272,800 accounted for 16·1 p.c. of total trade in those commodities. Manufacturers' sales offices were most active in metals and metal work, machinery and electrical goods; and the trading of agents and brokers was most important in terms of dollar sales volume of farm products (raw materials).

Wholesalers of all types employed a minimum of 178,658 persons and a maximum of 224,526 in 1951. Though the figures for employees were not compiled on a basis comparable with 1941, the payroll in 1951 of $543,047,800 was comparable with that of $189,449,100 in 1941, and exceeded it by 186·6 p.c.

Table 5 shows wholesale establishments grouped according to the number of employees for 1951. Those with five or more employees accounted for only 36 p.c. of the total number of establishments, but were responsible for 78 p.c. of the total dollar volume of wholesale trade.

2.—Wholesale Trade, classified by Major Type of Operation, by Province, 1951

Province and Major Type of Operation	Establishments	Sales	Working Proprietors	Employees		Payroll	Stocks on Hand, Dec. 31
				Minimum	Maximum		
	No.	$'000	No.	No.	No.	$'000	$'000
Newfoundland—							
Wholesalers proper	186	72,735	116	2,560	3,458	4,981	11,461
Petroleum bulk tank stations	25	19,211	9	332	471	1,077	5,429
Assemblers of primary products	9	1,956	4	33	126	75	358
Manufacturers' sales branches and offices	17	20,003	—	170	194	563	1,403
Agents and brokers	44	14,605	30	168	346	465	557
Totals, Newfoundland	**281**	**128,510**	**159**	**3,263**	**4,595**	**7,160**	**19,207**
Prince Edward Island—							
Wholesalers proper	48	16,961	45	344	571	866	1,722
Petroleum bulk tank stations	26	6,339	16	55	66	129	532
Assemblers of primary products	64	8,325	58	128	305	351	431
Manufacturers' sales branches and offices	8	408	1	17	19	34	34
Agents and brokers	11	1,400	10	22	34	48	155
Totals, Prince Edward Island	**157**	**33,433**	**130**	**566**	**995**	**1,427**	**2,874**
Nova Scotia—							
Wholesalers proper	364	136,839	178	3,083	4,012	7,863	16,459
Petroleum bulk tank stations	138	33,875	75	617	708	1,718	2,555
Assemblers of primary products	84	14,811	61	374	813	928	772
Manufacturers' sales branches and offices	125	109,931	—	1,482	1,784	4,558	7,516
Agents and brokers	29	12,937	15	127	150	300	339
Totals, Nova Scotia	**740**	**308,392**	**329**	**5,683**	**7,467**	**15,367**	**27,640**

2.—Wholesale Trade, classified by Major Type of Operation, by Province, 1951—continued

Province and Major Type of Operation	Establishments	Sales	Working Proprietors	Employees		Payroll	Stocks on Hand, Dec. 31
				Minimum	Maximum		
	No.	$'000	No.	No.	No.	$'000	$'000
New Brunswick—							
Wholesalers proper	252	109,503	120	2,604	3,510	6,836	12,360
Petroleum bulk tank stations	101	32,525	56	354	453	986	3,178
Assemblers of primary products	72	30,458	48	483	1,603	1,328	1,175
Manufacturers' sales branches and offices	113	72,057	—	1,123	1,283	3,193	6,955
Agents and brokers	30	7,134	29	95	118	248	567
Totals, New Brunswick	**568**	**251,676**	**253**	**4,659**	**6,967**	**12,591**	**24,236**
Quebec—							
Wholesalers proper	3,304	1,755,517	2,200	29,816	36,670	87,497	196,741
Petroleum bulk tank stations	341	218,284	224	2,189	2,555	6,877	5,812
Assemblers of primary products	422	159,701	359	1,837	2,592	4,528	8,733
Manufacturers' sales branches and offices	583	1,320,640	3	10,078	11,379	34,604	68,528
Agents and brokers	445	558,724	322	1,907	2,552	7,297	14,309
Other types of operation	70	20,623	65	363	445	876	1,180
Totals, Quebec	**5,165**	**4,033,489**	**3,173**	**46,190**	**56,193**	**141,680**	**295,304**
Ontario—							
Wholesalers proper	3,669	1,955,327	2,412	36,535	44,481	113,136	226,297
Petroleum bulk tank stations	676	390,266	361	4,687	5,561	13,251	33,434
Assemblers of primary products	686	323,447	663	2,974	5,254	9,191	10,858
Manufacturers' sales branches and offices	907	1,303,620	3	12,712	14,793	42,995	69,326
Agents and brokers	486	353,853	378	1,872	2,474	6,723	9,276
Other types of operation	88	57,022	—	971	1,143	3,135	1,167
Totals, Ontario	**6,512**	**4,383,535**	**3,817**	**59,751**	**73,706**	**188,430**	**350,357**
Manitoba—							
Wholesalers proper	600	320,210	315	7,611	9,361	22,171	40,262
Petroleum bulk tank stations	420	60,664	374	908	1,129	2,609	5,221
Assemblers of primary products	832	246,202	67	2,544	3,537	7,783	13,894
Manufacturers' sales branches and offices	258	250,926	—	3,068	3,691	10,053	21,454
Agents and brokers	260	1,148,477	185	968	1,121	3,535	44,061
Totals, Manitoba	**2,370**	**2,026,479**	**941**	**15,099**	**18,839**	**46,151**	**124,891**
Saskatchewan—							
Wholesalers proper	338	199,210	152	4,025	4,775	11,111	28,489
Petroleum bulk tank stations	984	72,800	785	1,216	1,574	3,072	7,781
Assemblers of primary products	2,996	372,352	33	3,466	3,932	8,473	77,629
Manufacturers' sales branches and offices	157	123,112	—	1,603	2,003	4,940	16,993
Agents and brokers	50	31,371	18	161	203	482	671
Other types of operation	1						
Totals, Saskatchewan	**4,526**	**798,844**	**988**	**10,471**	**12,487**	**28,077**	**131,562**
Alberta—							
Wholesalers proper	646	392,559	230	7,605	9,630	22,624	56,770
Petroleum bulk tank stations	802	91,690	744	1,231	1,688	3,510	7,746
Assemblers of primary products	1,872	310,378	102	2,960	3,992	8,003	35,209
Manufacturers' sales branches and offices	243	202,242	—	2,629	3,252	8,817	25,334
Agents and brokers	130	102,504	76	482	727	1,702	5,079
Other types of operation	2						
Totals, Alberta	**3,695**	**1,099,373**	**1,152**	**14,907**	**19,289**	**44,655**	**130,137**

2.—Wholesale Trade, classified by Major Type of Operation, by Province, 1951—concluded

Province and Major Type of Operation	Establishments	Sales	Working Proprietors	Employees		Payroll	Stocks on Hand, Dec. 31
				Minimum	Maximum		
	No.	$'000	No.	No.	No.	$'000	$'000
British Columbia—							
Wholesalers proper	1,079	533,880	454	11,509	14,169	35,056	83,602
Petroleum bulk tank stations	367	94,595	314	1,557	1,838	5,368	7,287
Assemblers of primary products	140	49,988	63	770	3,051	2,824	2,617
Manufacturers' sales branches and offices	291	391,987	—	3,504	4,034	11,734	33,066
Agents and brokers	256	263,165	197	681	802	2,373	3,460
Other types of operation	4	694	3	10	13	26	107
Totals, British Columbia	**2,137**	**1,334,308**	**1,031**	**18,031**	**23,907**	**57,381**	**130,138**
Yukon and N.W.T.—							
Wholesalers proper	7	1,216	5	18	38	56	144
Petroleum bulk tank stations	6	1,782	11	20	43	72	620
Assemblers of primary products	2						
Manufacturers' sales branches and offices	1						
Totals, Yukon and N.W.T.	**16**	**2,998**	**16**	**38**	**81**	**128**	**764**
Canada—[1]							
Wholesalers proper	10,486	5,492,741	6,222	105,692	130,637	312,141	674,160
Petroleum bulk tank stations	3,880	1,020,249	2,958	13,146	16,043	38,597	78,974
Assemblers of primary products	7,177	1,517,617	1,458	15,569	25,205	43,483	151,675
Manufacturers' sales branches and offices	2,702	3,794,925	7	36,386	42,432	121,491	250,610
Agents and brokers	1,741	2,493,563	1,259	6,458	8,488	23,101	78,220
Other types of operation	165	78,944	69	1,369	1,640	4,108	2,708
Totals, Canada[1]	**26,167**	**14,401,037**	**11,989**	**178,658**	**224,526**	**543,048**	**1,237,110**

[1] Totals for Canada include figures for the Yukon and Northwest Territories, but the individual items under "Canada" are exclusive of the figures for those Territories.

3.—Wholesale Trade, classified by Major Type of Operation and Kind of Business, 1951

Note.—Figures for the Yukon Territory and the Northwest Territories are included in "Totals, All Establishments" but are excluded from the individual items.

Major Type of Operation and Kind of Business	Establishments	Sales	Employees		Payroll	Stocks on Hand, Dec. 31
			Minimum	Maximum		
	No.	$'000	No.	No.	$'000	$'000
Wholesalers Proper—						
Amusement, sporting and photographic goods	172	32,038	1,090	1,464	3,190	6,037
Automotive	902	349,137	10,983	12,825	31,072	64,042
Beer, wine and distilled spirits	26	[1]	[1]	[1]	[1]	[1]
Chemicals, drugs and allied products	357	163,096	3,889	4,461	11,923	16,796
Coal and coke	127	226,665	2,257	3,116	6,157	23,302
Dry goods and apparel	979	281,742	6,375	7,597	19,709	55,157
Electrical goods	390	185,120	4,059	4,756	12,920	24,459
Farm products (raw materials)	80	136,420	415	585	1,745	17,224
Farm supplies	126	80,386	969	1,417	2,621	5,591
Food products (except groceries) and tobacco	1,395	854,099	10,090	13,534	27,705	41,531
Forest products (except lumber)	76	16,974	507	1,483	2,028	1,366
Furniture and house furnishings	321	93,448	2,495	3,043	8,616	19,107
General merchandise	293	197,995	4,892	5,851	13,122	30,869
Groceries and food specialties	835	883,273	12,950	15,170	33,886	80,700
Hardware	289	261,307	8,519	9,247	22,791	66,148
Jewellery	170	27,457	880	1,024	2,836	8,265
Leather and leather goods	70	9,120	244	314	914	1,580

For footnote, *see* end of table.

3.—Wholesale Trade, classified by Major Type of Operation and Kind of Business, 1951—continued

Major Type of Operation and Kind of Business	Establishments	Sales	Employees		Payroll	Stocks on Hand, Dec. 31
			Minimum	Maximum		
	No.	$'000	No.	No.	$'000	$'000
Wholesalers Proper—concl.						
Lumber and building materials (other than metal)	698	317,187	7,185	10,280	22,682	35,739
Machinery equipment and supplies	1,549	605,982	13,900	16,909	46,528	109,323
Metals and metal work	141	216,953	1,539	1,927	5,952	15,678
Paper and paper products	320	212,621	3,740	4,375	10,807	16,014
Petroleum and petroleum products	6	[1]	[1]	[1]	[1]	[1]
Plumbing and heating equipment and supplies	207	105,849	2,395	2,965	8,276	14,365
Waste materials (including scrap metal)	444	139,815	2,912	3,886	8,214	10,271
Other kinds of business	513	89,747	3,281	4,237	8,110	9,996
Totals, Wholesalers Proper	**10,486**	**5,492,741**	**105,692**	**130,637**	**312,141**	**674,160**
Petroleum Bulk Tank Stations	**3,880**	**1,020,249**	**13,146**	**16,043**	**38,597**	**78,974**
Assemblers of Primary Products—						
Farm products (raw materials)	5,941	1,160,336	9,289	11,185	25,265	129,809
Farm supplies	120	34,154	686	1,220	1,889	3,847
Food products (except groceries) and tobacco	1,053	302,046	5,031	11,257	15,203	17,091
Forest products (except lumber)	62	21,081	563	1,543	1,125	928
Other kinds of business	1					
Totals, Assemblers of Primary Products	**7,177**	**1,517,617**	**15,569**	**25,205**	**43,483**	**151,675**
Manufacturers' Sales Branches and Offices—						
Amusement, sporting and photographic goods	18	7,723	154	202	547	1,287
Automotive	135	315,512	2,382	2,847	8,555	18,864
Beer, wine and distilled spirits	20	17,141	306	369	1,041	2,678
Chemicals, drugs and allied products	158	259,008	2,575	2,859	8,318	12,606
Coal and coke	1	[1]	[1]	[1]	[1]	[1]
Dry goods and apparel	204	273,884	2,033	2,334	7,158	11,335
Electrical goods	187	407,995	4,464	5,355	13,981	40,119
Farm products (raw materials)	6	[1]	[1]	[1]	[1]	[1]
Farm supplies	38	16,132	173	191	404	1,284
Food products (except groceries) and tobacco	189	274,113	2,863	3,510	8,969	21,115
Forest products (except lumber)	2	[1]	[1]	[1]	[1]	[1]
Furniture and house furnishings	81	29,574	389	490	1,431	2,639
General merchandise	4	2,809	75	86	216	859
Groceries and food specialties	275	307,436	3,679	4,005	10,717	21,027
Hardware	28	15,913	188	216	637	2,905
Jewellery	10	3,722	46	53	161	431
Leather and leather goods	15	7,722	86	91	347	619
Lumber and building materials (other than metal)	256	303,225	3,441	4,126	11,836	14,771
Machinery, equipment and supplies	580	465,116	8,534	9,934	27,735	56,386
Metals and metal work	105	581,191	1,185	1,395	4,837	23,084
Paper and paper products	168	326,918	1,229	1,358	5,506	3,836
Plumbing and heating equipment and supplies	107	104,194	1,357	1,570	5,456	9,007
Other kinds of business	115	49,887	1,004	1,189	2,989	4,624
Totals, Manufacturers' Sales Branches and Offices	**2,702**	**3,794,925**	**36,386**	**42,432**	**121,491**	**250,610**
Agents and Brokers—						
Amusement, sporting and photographic goods	12	1,914	21	29	55	136
Automotive	32	13,618	200	250	713	926
Beer, wine and distilled spirits	20	6,831	42	49	188	33
Chemicals, drugs and allied products	42	15,348	253	299	840	1,527
Coal and coke	21	10,866	71	84	217	159
Dry goods and apparel	512	191,520	948	1,105	3,246	2,949
Electrical goods	79	31,712	320	399	1,065	1,940
Farm products (raw materials)	117	1,345,002	704	1,125	2,593	45,994
Farm supplies	14	17,175	139	165	363	855
Food products (except groceries) and tobacco	110	138,226	324	467	1,032	2,619

For footnote, *see* end of table.

3.—Wholesale Trade, classified by Major Type of Operation and Kind of Business, 1951—concluded

Major Type of Operation and Kind of Business	Establishments	Sales	Employees		Payroll	Stocks on Hand Dec. 31
			Minimum	Maximum		
	No.	$'000	No.	Mo.	$'000	$'000
Agents and Brokers—concl.						
Forest products (except lumber)	9	4,499	24	35	60	811
Furniture and house furnishings	61	23,312	206	272	803	409
General merchandise	44	46,102	170	228	630	599
Groceries and food specialties	130	145,029	573	634	1,987	4,637
Hardware	60	20,069	149	169	540	493
Jewellery	22	3,634	64	80	293	537
Leather and leather goods	19	12,096	72	80	177	399
Lumber and building materials (other than metal)	74	77,422	363	530	1,416	3,979
Machinery, equipment and supplies	166	36,613	589	862	2,240	3,648
Metals and metal work	33	161,226	443	478	2,016	3,028
Paper and paper products	31	94,831	99	117	446	87
Petroleum and petroleum products	5	3,975	69	130	284	67
Plumbing and heating equipment and supplies	24	4,245	45	57	176	155
Other kinds of business	104	88,300	570	844	1,722	2,233
Totals, Agents and Brokers	**1,741**	**2,493,563**	**6,458**	**8,488**	**23,101**	**78,220**
Other Types of Operation	**165**	**78,944**	**1,369**	**1,640**	**4,108**	**2,708**
Totals, All Establishments[2]	**26,167**	**14,401,037**	**178,658**	**224,526**	**543,048**	**1,237,110**

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[1] Figures are confidential and cannot be published separately but are included in totals. [2] *See* headnote.

4.—Wholesale Trade in Urban Centres of over 30,000 Population, 1951

Urban Centre	Establishments	Sales	Working Proprietors	Employees		Payroll	Stocks on Hand, Dec. 31
				Minimum	Maximum		
	No.	$'000	No.	No.	No.	$'000	$'000
Brantford, Ont	72	25,045	50	462	544	1,238	1,996
Calgary, Alta	463	356,056	141	5,349	6,493	16,558	33,234
Edmonton, Alta	473	407,651	120	5,942	7,857	18,737	48,734
Fort William, Ont	82	60,539	26	1,029	1,264	3,150	6,591
Halifax, N.S	241	177,646	41	3,024	3,623	8,794	15,144
Hamilton, Ont	329	262,681	178	4,092	4,905	12,816	23,794
Hull, Que	20	4,317	21	91	105	198	556
Kingston, Ont	65	22,767	32	578	711	1,451	2,687
Kitchener, Ont	86	35,797	39	737	820	2,209	3,330
London, Ont	193	133,022	59	2,312	2,682	7,000	11,863
Montreal, Que	2,799	3,116,851	1,463	31,608	37,314	102,662	204,740
Oshawa, Ont	29	17,439	14	245	285	709	1,117
Ottawa, Ont	297	204,702	122	3,107	3,630	9,539	16,620
Outremont, Que	22	42,205	4	670	741	2,205	4,497
Peterborough, Ont	60	26,405	35	355	450	1,009	1,561
Port Arthur, Ont	54	26,207	26	638	1,022	1,983	3,282
Quebec, Que	391	296,277	201	4,411	5,149	12,098	26,856
Regina, Sask	212	155,361	49	3,057	3,555	8,991	20,221
St. Catharines, Ont	51	25,861	25	386	488	1,098	2,248
Saint John, N.B	163	99,092	54	1,631	1,906	4,554	10,009
St. John's, N'f'ld	163	85,681	75	2,313	3,197	5,018	11,259
Sarnia, Ont	41	14,957	21	368	458	1,122	1,929
Saskatoon, Sask	163	129,652	44	2,137	2,559	6,183	16,637
Sault Ste. Marie, Ont	43	28,896	21	483	629	1,527	2,438
Sherbrooke, Que	85	45,852	38	825	991	2,187	5,629
Sudbury, Ont	55	52,648	23	726	842	2,079	4,322
Sydney, N.S	73	35,151	21	570	666	1,525	2,744
Three Rivers, Que	76	29,856	36	528	652	1,232	3,577
Toronto, Ont	2,382	2,498,521	1,281	29,154	34,744	98,956	186,661
Vancouver, B.C	1,227	1,065,946	487	13,294	15,825	42,238	100,056
Verdun, Que	18	8,710	7	279	342	897	1,453
Victoria, B.C	139	55,709	53	1,180	1,356	3,729	6,607
Windsor, Ont	183	115,897	91	1,598	1,978	5,075	8,726
Winnipeg, Man	1,071	1,731,151	462	12,547	15,411	39,445	106,720

5.—Wholesale Trade Establishments Grouped According to Number of Employees, 1951

Number of Employees	Establishments		Sales		Working Proprietors	Employees				Payroll	
						Minimum		Maximum			
	No.	p.c.	$'000	p.c.	No.	No.	p.c.	No.	p.c.	$'000	p.c.
Establishments Reporting—											
No employees...	3,770	18·1	718,934	5·2	4,294	—	—	1,442	0·7	988	0·2
1 employee......	3,955	19·0	491,758	3·6	2,743	3,955	2·3	7,256	3·4	12,118	2·3
2 employees.....	2,596	12·4	642,875	4·7	1,568	5,192	3·0	7,828	3·6	16,027	3·1
3 "	1,783	8·5	617,649	4·5	868	5,349	3·1	7,462	3·4	16,533	3·2
4 "	1,319	6·3	541,666	3·9	619	5,276	3·1	6,976	3·2	16,895	3·2
5-9 "	3,223	15·4	2,080,666	15·1	1,201	21,025	12·3	28,744	13·3	67,480	12·9
10-14 "	1,476	7·1	1,285,978	9·4	352	17,221	10·1	22,450	10·4	56,505	10·8
15-19 "	787	3·8	1,013,749	7·4	125	13,249	7·7	16,188	7·5	40,893	7·8
20-49 "	1,381	6·6	3,035,825	22·1	150	40,956	23·9	50,120	23·2	124,267	23·7
50-99 "	388	1·9	1,905,095	13·8	23	26,295	15·3	30,550	14·1	78,868	15·0
100 or more employees........	190	0·9	1,422,698	10·3	4	32,883	19·2	37,167	17·2	93,060	17·8
Totals, Establishments Reporting	**20,868**	**79·7**	**13,756,893**	**95·5**	**11,947**	**171,401**	**95·9**	**216,183**	**96·3**	**523,633**	**96·4**
Totals, All Establishments........	**26,167**	**100·0**	**14,401,037**	**100·0**	**11,989**	**178,658**	**100·0**	**224,526**	**100·0**	**543,048**	**100·0**

6.—Wholesale Trade, by Major and Detailed Type of Operation, 1951

Note.—Figures for the Yukon Territory and the Northwest Territories are included in "Totals, All Establishments" but are excluded from the individual items.

Type of Operation	Establishments	Sales	Employees		Payroll	Stocks on Hand, Dec. 31
			Minimum	Maximum		
	No.	$'000	No.	No.	$'000	$'000
Wholesalers Proper—						
Drop shippers and desk jobbers.....	126	82,642	438	566	1,657	3
Export merchants..................	100	175,800	747	1,653	2,451	6,180
Import merchants..................	1,637	991,044	16,208	19,585	51,594	157,216
Mail order wholesalers.............	98	34,566	875	1,126	2,450	5,097
Voluntary group wholesalers........	139	375,047	5,003	5,565	13,663	28,746
Wagon distributors.................	106	14,090	255	334	696	557
Wholesale merchants...............	8,280	3,819,552	82,166	101,808	239,629	476,362
Totals, Wholesalers Proper........	**10,486**	**5,492,741**	**105,692**	**130,637**	**312,140**	**674,160**
Petroleum Bulk Tank Stations—						
Commission stations................	2,583	238,627	2,033	3,236	4,984	18,525
Independent stations................	534	60,622	995	1,314	2,847	4,857
Salary stations.....................	763	721,000	10,118	11,493	30,776	55,592
Totals, Petroleum Bulk Tank Stations........................	**3,880**	**1,020,249**	**13,146**	**16,043**	**38,607**	**78,974**
Assemblers of Primary Products—						
Buyers of primary products..........	1,528	565,853	5,876	10,835	17,113	20,527
Co-operative selling organizations...	356	299,484	2,379	5,857	6,767	12,146
Grain elevators.....................	5,285	650,937	7,289	8,360	19,481	118,961
Packers and shippers...............	8	1,343	25	153	122	41
Totals, Assemblers of Primary Products........................	**7,177**	**1,517,617**	**15,569**	**25,205**	**43,483**	**151,675**

6.—Wholesale Trade, by Major and Detailed Type of Operation, 1951—concluded

Type of Operation	Establishments	Sales	Employees		Payroll	Stocks on Hand, Dec. 31
			Minimum	Maximum		
	No.	$'000	No.	No.	$'000	$'000
Manufacturers' Sales Branches and Offices—						
District or general sales offices	26	473,800	1,311	1,514	5,241	16,838
Manufacturers' sales branches (without stock)	683	1,121,645	5,166	6,036	19,936	—
Manufacturers' sales branches (with stock)	1,993	2,199,480	29,909	34,882	96,314	233,772
Totals, Manufacturers' Sales Branches and Offices	**2,702**	**3,794,925**	**36,386**	**42,432**	**121,491**	**250,610**
Agents and Brokers—						
Auction companies	14	26,887	135	467	498	5,819
Brokers	94	581,373	203	215	614	321
Commission merchants	197	367,566	1,633	1,999	5,589	26,929
Export agents and brokers	44	559,690	418	502	1,586	24,436
Import agents and brokers	278	156,231	976	1,240	3,834	5,310
Manufacturers' agents	1,051	477,589	2,823	3,696	9,829	12,908
Purchasing agents and resident buyers	36	145,435	114	159	419	1,452
Selling agents	27	178,792	156	210	732	1,045
Totals, Agents and Brokers	**1,741**	**2,493,563**	**6,458**	**8,488**	**23,101**	**78,220**
Other Types of Operation	**165**	**78,944**	**1,369**	**1,640**	**4,107**	**2,708**
Totals, All Establishments[1]	**26,167**	**14,401,037**	**178,658**	**224,526**	**543,048**	**1,237,110**

[1] *See* headnote.

Retail Trade.—The tables of this Subsection incorporate data for all establishments within the scope of the 1951 Census of Distribution, the basis for inclusion being conformity to the definition that an establishment must be a recognizable place of business, engaged mainly in the selling of merchandise to household consumers. The most significant information tabulated in the Census is the total dollar volume of sales made through retail establishments during the year 1951, and the total number of such establishments in existence at a designated point in time (June 1951).

Total sales and numbers of establishments have been tabulated by province, by county or census division, by incorporated city, town or village of 1,000 population or over and, for the first time, by metropolitan area. Additional information on employment and payrolls, year-end inventories and credit have been tabulated in lesser detail in certain instances. Complete results are available in 1951 Census Vol. VII—*Retail Trade.*

In addition to the more obvious types of retail outlets, such as drug stores, grocery stores, restaurants and shoe stores, the Census included, among others, gasoline filling stations, lumber and building materials dealers, fuel dealers and florists. Although by far the major part of retail trade is carried on in retail establishments, a fair amount is transacted through other distribution channels, the more important of which are manufacturing bakeries and dairies, service establishments such as hotels and bowling alleys, wholesale establishments and itinerant operators without an established place of business. A summary table showing these segments of retail trade appears in the Census of 1951 Vol. X.

In 1951, there were 151,626 retail establishments engaged mainly in selling merchandise to household consumers, and they accounted for a total sales volume of $10,652,779,800. This was an increase of 14,295 establishments since the previous count was made in 1941, and an increase of $7,211,877,800 in terms of dollar sales volume. All provinces, except Saskatchewan, had more retail establishments in operation in 1951 than in 1941, and all shared in the greatly expanded dollar sales volume. Ontario, with one-third of Canada's retail stores, had sales of $4,116,372,500 or almost 40 p.c. of the total retail trade in Canada. Quebec, with 43,572 stores, had sales of $2,436,913,100 in 1951. Sales in British Columbia were also over $1,000,000,000. Newfoundland's retail trade was measured for the first time in 1951 and showed 4,090 stores with sales of $159,805,000. Table **7** gives summary figures of retail trade, by province.

7.—Summary of Retail Trade, by Province, 1951

Province or Territory	Stores	Sales	Stocks on Hand, Dec. 31 (at cost)	Working Proprietors	Paid Employees		Payroll
					Minimum	Maximum	
	No.	$'000	$'000	No.	No.	No.	$'000
Newfoundland	4,090	159,805	30,558	4,135	7,070	9,911	11,281
Prince Edward Island	972	54,118	8,228	997	2,196	2,811	3,418
Nova Scotia	7,176	393,880	52,030	6,685	17,844	23,560	29,877
New Brunswick	5,430	285,814	44,597	5,076	12,916	17,513	23,525
Quebec	43,572	2,436,913	351,115	42,690	108,734	138,791	206,776
Ontario	50,119	4,116,372	523,016	50,103	181,563	239,053	369,301
Manitoba	7,432	609,284	84,769	7,687	27,798	39,971	57,665
Saskatchewan	9,585	653,816	108,282	9,925	20,782	28,705	41,656
Alberta	9,943	848,283	124,227	10,319	30,501	41,008	63,750
British Columbia	13,151	1,082,637	147,773	12,372	45,067	62,139	101,897
Yukon and N.W.T.	156	11,858	3,528	100	323	429	896
Canada	**151,626**	**10,652,780**	**1,478,123**	**150,089**	**454,794**	**603,891**	**910,042**

Results of the Census showed that two of the 15 census metropolitan areas accounted for retail sales well in excess of $1,000,000,000 each—Toronto metropolitan area had sales of $1,244,003,100 and Montreal metropolitan area, $1,211,676,300. The 15 census metropolitan areas had a total retail sales volume of $5,104,414,300 in 1951, or nearly 48 p.c. of all retail sales in Canada. Retail sales in the Toronto metropolitan area represented about 30 p.c. of total Ontario retail sales, and the aggregate sales for the five Ontario metropolitan areas (Toronto, Hamilton, Ottawa, Windsor, and London) accounted for 49 p.c. of the provincial total. In comparison, retail stores in the Montreal metropolitan area had nearly 50 p.c. of the total sales for the Province of Quebec, and those for Quebec City another 8 p.c., making approximately 58 p.c. of the provincial total for the Province's two metropolitan areas. In British Columbia, Vancouver metropolitan area stores had 52·5 p.c., and those of Victoria metropolitan area, 9·4 p.c. of the Province's total sales.

8.—Retail Trade by Major Groups of Business, for Fifteen Census Metropolitan Areas, 1951

Metropolitan Area	Total Stores	Total Sales	Food and Beverage		General Merchandise		Automotive		Apparel and Accessories	
			Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales
	No.	$'000	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Calgary	1,353	181,903	580	46,315	34	40,000	171	43,751	181	14,316
Edmonton	1,536	208,829	652	52,828	36	49,499	205	49,468	175	[1]
Halifax	1,199	123,131	682	41,605	44	26,418	90	22,531	123	9,057
Hamilton	2,719	256,070	1,119	83,774	68	29,752	361	60,193	368	22,772
London	1,182	131,437	399	37,219	31	[1]	174	31,660	162	12,731
Montreal	14,178	1,211,676	7,484	450,824	394	183,254	749	206,208	2,477	119,229
Ottawa	2,395	251,536	1.203	86,270	61	36,717	227	49,407	300	21,506
Quebec	2,959	194,738	1,593	74,404	115	29,960	189	33,307	393	20,571
Saint John, N.B	840	61,641	453	23,001	29	7,762	78	11,615	81	6,380
St. John's, N'f'ld	774	64,775	547	23,388	44	17,855	45	10,367	35	4,281
Toronto	11,253	1,244,003	4,415	384,436	310	212,483	1,022	272,984	1,993	99,278
Vancouver	6,015	568,302	2,636	164,116	185	108,917	572	146,186	903	41,119
Victoria	1,107	102,199	512	30,910	35	19,925	114	22,506	136	8,386
Windsor	1,661	145,623	778	55,577	47	11,990	226	29,084	185	13,863
Winnipeg	3,022	353.051	1,477	94,171	83	94,217	327	72,585	359	18,283

Metropolitan Area	Building Materials and Hardware		Furniture, Household Appliances, Radio and Home Furnishings		Drug and Health Appliance		Second-hand		Other Retail Stores	
	Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales	Stores	Sales
	No.	$'000	No.	$'000	No.	$'000	No.	$'000	No.	$'000
Calgary	69	15,871	87	7,240	70	[1]	31	[1]	130	[1]
Edmonton	107	17,046	76	[1]	92	5,008	30	760	163	11,626
Halifax	47	5,601	34	3,406	55	3,140	20	222	104	11,152
Hamilton	117	14,979	133	11,484	128	8,583	32	638	393	23,897
London	65	7,745	72	8,996	66	4,624	17	[1]	196	14,545
Montreal	518	63,988	488	55,645	457	30,889	88	2,712	1,523	98,927
Ottawa	82	[1]	75	9,803	104	6,134	24	[1]	319	28,498
Quebec	115	6,532	84	8,278	87	5,444	22	195	361	16,048
Saint John, N.B	28	2,410	25	2,274	33	2,114	16	331	97	5,754
St. John's, N'f'ld	19	2,997	10	[1]	21	1,032	3	[1]	50	4,021
Toronto	559	57,820	526	54,763	651	41,328	156	3,372	1,621	117,539
Vancouver	346	29,077	257	21,503	262	16,254	138	2,939	716	38,192
Victoria	48	4,695	56	4,949	37	2,193	38	685	131	7,949
Windsor	100	7,937	80	12,489	79	[1]	16	[1]	150	9,422
Winnipeg	128	27,427	110	11,417	178	11,453	66	1,291	294	22,208

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[1] Figures withheld to avoid disclosure of individual operations.

The 106 urban centres in Canada with populations of over 10,000 in 1951 had retail sales totalling about $6,468,000,000 in that year, or 61 p.c. of Canada's total retail trade. In the city of Montreal sales exceeded $1,000,000,000 and those in the city of Toronto were slightly under that figure. Vancouver and Winnipeg ranked third and fourth with sales of $456,000,000 and $310,000,000, respectively. Table **9** shows figures for each of the 106 urban centres for 1941 and 1951.

9.—Retail Trade in Urban Centres of over 10,000 Population (in 1951), 1941 and 1951

Urban Centre and Province	Population		Stores		Sales		
	1941	1951	1941	1951	1941	1951	P.C. Increase 1941-51
	No.	No.	No.	No.	$'000	$'000	
Arvida, Que	4,581	11,078	21	31	1,094	3,356	+206·8
Barrie, Ont	9,725	12,514	191	198	7,419	24,782	+234·0
Belleville, Ont	15,710	19,519	271	267	11,158	29,692	+166·1
Brandon, Man	17,383	20,598	227	235	9,367	30,506	+225·7
Brantford, Ont	31,948	36,727	453	476	17,504	48,653	+178·0
Brockville, Ont	11,342	12,301	167	168	6,598	16,785	+154·4
Calgary, Alta	88,904	129,060	1,181	1,301	51,814	179,823	+247·1
Cap de la Madeleine, Que	11,961	18,667	123	204	1,906	6,763	+254·8
Charlottetown, P.E.I	14,821	15,887	247	251	6,787	20,746	+205·7
Chatham, Ont	17,369	21,218	336	328	13,282	37,200	+180·1
Chicoutimi, Que	16,040	23,216	153	229	6,718	24,707	+267·8
Cornwall, Ont	14,117	16,899	242	279	7,598	25,728	+238·6
Dartmouth, N.S	10,847	15,037	147	157	6,502	15,882	+144·3
Drummondville, Que	10,555	14,341	178	249	4,564	16,871	+269·7
Eastview, Ont	7,966	13,799	86	96	1,310	7,379	+463·3
Edmundston, N.B	7,096	10,753	117	128	3,061	7,623	+149·0
Edmonton, Alta	93,817	159,631	1,126	1,458	47,931	204,789	+327·3
Forest Hill, Ont	11,757	15,305	63	111	1,987	9,498	+377·9
Fort William, Ont	30,585	34,947	348	356	15,230	31,468	+106·6
Fredericton, N.B	10,062	16,018	192	226	7,194	24,985	+247·3
Galt, Ont	15,346	19,207	237	233	8,149	20,326	+149·4
Glace Bay, N.S	25,147	25,586	293	262	7,230	15,830	+118·9
Granby, Que	14,197	21,989	219	335	4,263	18,104	+324·7
Grand'Mère, Que	8,608	11,089	123	166	2,023	7,191	+255·4
Guelph, Ont	23,273	27,386	330	340	11,413	31,906	+179·6
Halifax, N.S	70,488	85,589	915	847	51,152	101,119	+97·7
Hamilton, Ont	166,337	208,321	2,060	2,293	86,947	227,491	+161·6
Hull, Que	32,947	43,483	409	399	9,555	26,609	+178·5
Jacques Cartier, Que	..	22,450	..	210	..	4,792	..
Joliette, Que	12,749	16,064	214	258	5,155	16,238	+215·0
Jonquière, Que	13,769	21,618	127	215	5,036	14,275	+183·5
Kingston, Ont	30,126	33,459	389	376	17,602	43,976	+149·8
Kitchener, Ont	35,657	44,867	469	485	18,030	56,314	+212·3
Lachine, Que	20,051	27,773	268	273	5,669	19,306	+240·6
Lasalle, Que	4,651	11,633	36	82	474	3,743	+689·4
Leaside, Ont	6,183	16,233	56	120	2,012	14,997	+645·3
Lethbridge, Alta	14,612	22,947	233	319	10,700	42,542	+297·6
Lévis, Que	11,991	13,162	143	155	2,859	10,271	+259·2
London, Ont	78,264	95,343	1,092	1,053	39,990	125,682	+214·3
Longueuil, Que	7,087	11,103	92	102	2,608	7,660	+193·7
Magog, Que	9,034	12,423	122	191	2,424	8,484	+250·0
Medicine Hat, Alta	10,571	16,364	154	177	6,640	21,447	+223·0
Mimico, Ont	8,070	11,342	69	80	1,827	5,055	+176·7
Moncton, N.B	22,763	27,334	308	314	21,105	42,528	+101·5
Montreal, Que	903,007	1,021,520	12,745	11,491	394,415	1,012,626	+156·7
Montreal North, Que	6,152	14,081	58	108	657	3,855	+486·9
Moose Jaw, Sask	20,753	24,355	268	269	10,035	29,745	+196·4
Mount Royal, Que	4,888	11,352	16	29	475	9,952	+1,996·0
New Toronto, Ont	9,504	11,194	106	127	4,315	18,123	+320·0
New Waterford, N.S	9,302	10,423	120	134	2,720	6,958	+155·8
New Westminster, B.C	21,967	28,639	378	379	13,064	49,252	+277·0
Niagara Falls, Ont	20,589	22,874	344	410	14,616	38,775	+165·3
North Bay, Ont	15,599	17,944	207	222	8,081	26,494	+227·8
North Vancouver, B.C	8,914	15,687	129	156	2,885	9,009	+212·2
Orillia, Ont	9,798	12,110	198	207	4,446	5,662	+213·7
Oshawa, Ont	26,813	41,545	330	425	15,512	46,735	+201·3
Ottawa, Ont	154,951	202,045	1,559	1,721	81,501	210,919	+158·8
Outremont, Que	30,751	30,057	166	117	5,094	14,860	+191·8
Owen Sound, Ont	14,002	16,423	246	234	6,842	20,720	+202·7

9.—Retail Trade in Urban Centres of over 10,000 Population (in 1951), 1941 and 1951—concluded

Urban Centre and Province	Population		Stores		Sales		
	1941	1951	1941	1951	1941	1951	P.C. Increase 1941-51
	No.	No.	No.	No.	$'000	$'000	
Pembroke, Ont	11,159	12,704	163	152	5,137	15,740	+206·4
Penticton, B.C	[1]	10,548	..	156	..	13,036	..
Peterborough, Ont	25,350	38,272	370	413	14,534	44,612	+206·9
Port Arthur, Ont	24,426	31,161	294	342	13,320	36,004	+170·3
Prince Albert, Sask	12,608	17,149	161	208	6,050	22,545	+272·6
Quebec, Que	150,757	164,016	1,984	1,984	63,202	162,389	+156·9
Regina, Sask	58,245	71,319	586	546	37,929	103,779	+173·6
Rimouski, Que	7,009	11,565	120	176	3,409	12,299	+260·8
Rouyn, Que	8,808	14,633	189	218	4,929	15,652	+217·5
St. Boniface, Man	18,157	26,342	133	185	2,963	12,358	+317·0
St. Catharines, Ont	30,275	37,984	457	519	21,227	56,910	+168·1
St. Hyacinthe, Que	17,798	20,236	272	341	6,569	21,653	+229·6
St. Jean, Que	13,646	19,305	236	312	6,922	18,623	+169·0
St. Jérôme, Que	11,329	17,685	199	300	3,709	12,947	+249·1
St. John's, N'f'ld	..	52,873	..	668	..	62,753	..
St. Laurent, Que	6,242	20,426	63	135	1,372	14,559	+961·5
St. Michel, Que	2,956	10,539	30	68	268	2,354	+778·7
St. Thomas, Ont	17,132	18,173	278	275	9,415	24,886	+164·3
Saint John, N.B	51,741	50,779	803	643	24,683	55,543	+125·0
Sarnia, Ont	18,734	34,697	276	351	9,515	37,225	+291·2
Saskatoon, Sask	43,027	53,268	567	488	20,780	64,967	+212·6
Sault Ste. Marie, Ont	25,794	32,452	339	395	13,418	36,547	+172·4
Shawinigan Falls, Que	20,325	26,903	231	377	5,937	23,215	+291·0
Sherbrooke, Que	35,965	50,543	524	578	16,405	42,496	+159·0
Sillery, Que	..	10,376	..	60	..	2,656	..
Sorel, Que	12,251	14,961	201	232	4,981	10,835	+117·5
Stratford, Ont	17,038	18,785	249	246	8,023	23,409	+191·8
Sudbury, Ont	32,203	42,410	366	439	20,654	59,531	+188·2
Sydney, N.S	28,305	31,317	354	357	14,779	34,023	+130·2
Thetford Mines, Que	12,716	15,095	193	214	3,238	12,048	+272·1
Timmins, Ont	28,790	27,743	290	308	14,061	26,253	+86·7
Toronto, Ont	667,457	675,754	9,396	8,709	399,906	999,108	+149·8
Trail, B.C	9,392	11,430	139	130	5,717	14,623	+155·8
Trenton, Ont	8,323	10,085	137	138	4,567	12,367	+170·8
Three Rivers, Que	42,007	46,074	557	633	13,494	44,314	+228·4
Truro, N.S	10,272	10,756	176	181	8,536	16,343	+91·4
Valleyfield, Que	17,052	22,414	214	293	6,580	15,803	+140·2
Vancouver, B.C	275,353	344,833	4,351	4,338	145,205	456,160	+214·1
Verdun, Que	67,349	77,391	658	625	18,751	56,359	+200·6
Victoria, B.C	44,068	51,331	890	833	36,761	90,912	+147·3
Victoriaville, Que	8,516	13,124	150	229	2,875	11,513	+300·5
Waterloo, Ont	9,025	11,991	107	116	2,978	9,931	+233·5
Welland, Ont	12,500	15,382	222	230	10,213	24,693	+141·8
Westmount, Que	26,047	25,222	141	143	6,820	16,987	+149·1
Windsor, Ont	105,311	120,049	1,326	1,340	53,688	130,475	+143·0
Winnipeg, Man	221,960	235,710	2,467	2,326	136,615	310,102	+127·0
Woodstock, Ont	12,461	15,544	212	216	6,951	19,455	+179·9

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[1] Not incorporated in 1941.

When sales figures, tabulated by kind of business, are examined for 1941 and 1951, two groups are of great significance—the food and beverage group with sales of $3,232,312,000, and the automotive group with sales of $2,544,089,000. Together, these two groups of stores accounted for sales of $5,776,401,000 or more than one-half of all sales in Canada's retail stores. In the food and beverage group, the outstanding development has been the growing importance of the combination store selling groceries and fresh meat; the number of such stores doubled between 1941 and 1951, and sales quadrupled. The automotive group sales increase from $594,719,500 to $2,544,088,600 was the largest of the many substantial increases in the decade.

10.—Number of Retail Stores and Sales, by Kind of Business, 1930, 1941 and 1951

Kind of Business	Stores			Sales				
	1930	1941	1951	1930	1941	1951	P.C. Change	
							1930/51	1941/51
	No.	No.	No.	$'000	$'000	$'000		
Food and Beverages—								
Candy, nut and confectionery stores	8,981	11,583	8,996	54,176	67,260	137,017	+153	+104
Grocery stores, without fresh meat	18,166	21,884	22,239	243,699	266,028	622,117	+155	+134
Combination stores (grocery stores with fresh meat)	5,162	6,101	12,152	161,704	301,351	1,276,804	+690	+324
Meat and fish markets	5,379	4,793	3,320	83,026	83,252	181,318	+118	+118
Restaurants	5,609	8,821	13,837	75,977	131,181	452,271	+495	+245
Totals, Food and Beverages[1]	..	**58,491**	**65,134**	..	**1,062,001**	**3,232,312**	..	**+204**
General Merchandise—								
Department stores and mail order offices or houses of department stores	148	504	649	355,259	377,806	910,129	+156	+141
General stores	11,355	11,917	10,457	207,657	214,748	519,819	+150	+142
Variety stores	513	1,085	1,391	44,212	85,177	195,624	+343	+130
Totals, General Merchandise[1]	**14,889**	**15,711**	**16,153**	**680,346**	**740,719**	**1,795,674**	**+164**	**+142**
Automotive—								
Automobile dealers	2,736	2,835	5,168	253,608	370,956	1,983,751	+682	+435
Garages	4,140	3,156	3,694	47,560	47,561	135,697	+185	+185
Filling stations	5,503	10,130	8,394	66,449	157,558	338,249	+409	+115
Totals, Automotive[1]	**13,016**	**16,867**	**18,380**	**380,915**	**594,720**	**2,544,089**	**+568**	**+328**
Apparel and Accessories—								
Men's and boys' clothing and clothing and furnishings stores	3,969	3,485	3,971	72,111	79,873	201,689	+180	+153
Women's apparel and accessories stores	3,715	5,508	6,357	69,806	97,522	259,031	+271	+166
Family clothing stores	1,149	1,934	2,686	42,144	73,779	192,962	+358	+162
Shoe stores	1,641	1,674	2,242	35,908	44,037	111,488	+211	+153
Totals, Apparel and Accessories[1]	**10,474**	**12,601**	**16,283**	**219,969**	**295,212**	**783,322**	**+256**	**+165**
Building Materials and Hardware—								
Lumber and building materials dealers	1,825	1,611	2,193	66,201	79,786	357,611	+440	+348
Hardware stores	2,901	3,020	3,872	70,892	73,143	227,395	+221	+211
Totals, Building Materials and Hardware[1]	**6,144**	**5,801**	**7,887**	**164,112**	**174,203**	**673,980**	**+311**	**+287**
Furniture, Household Appliances, Radio and Home Furnishings—								
Furniture stores	1,101	1,337	1,750	41,017	64,057	146,793	+258	+129
Household appliance and radio stores	1,528	1,648	2,789	51,692	45,895	210,238	+307	+358
Totals, Furniture, Household Appliances, Radio and Home Furnishings[1]	**3,079**	**3,498**	**5,221**	**99,791**	**118,357**	**394,471**	**+295**	**+233**
Second-hand	**1,606**	**1,740**	**1,244**	**11,813**	**11,071**	**23,139**	**+96**	**+109**

For footnote, *see* end of table.

10.—Number of Retail Stores and Sales, by Kind of Business, 1930, 1941 and 1951—concluded

Kind of Business	Stores			Sales			P.C. Change	
	1930	1941	1951	1930	1941	1951	1930/51	1941/51
	No.	No.	No.	$'000	$'000	$'000		
Other Retail Stores—								
Drug stores (with and without soda fountain).......	3,559	3,956	4,325	76,849	101,027	248,449	+223	+146
Tobacco stores and stands.	2,420	4,239	2,330	30,703	43,227	78,291	+155	+81
Jewellery stores...........	1,532	1,692	2,610	26,663	38,454	104,567	+292	+172
Totals, Other Retail Stores[1]	..	**22,622**	**21,324**	..	**444,620**	**1,205,793**	..	**+171**
Totals, All Stores[1]..........	**119,621**	**137,331**	**151,626**	**2,740,105**	**3,440,902**	**10,652,780**	**+289**	**+210**

[1] Includes kinds of business for which separate figures are not shown.

Between the two Census years, 1941 and 1951, no significant change took place in the proportion of Canada's retail trade done by independent (including department) stores and chain organizations operating four or more units in the same kind of business. Chains actually accounted for a slightly smaller part of the total—16·7 p.c. in 1951 compared with 18·6 p.c. in 1941. On the other hand, independent stores had 83·3 p.c. of the total in 1951 compared with 81·4 p.c. in 1941. By individual trades, more noteworthy changes took place. Chain filling-stations dropped from 8·6 p.c. of the total in 1941 to 1·1 p.c. in 1951, while chain household-appliance and radio stores decreased from 40·5 p.c. to 22·6 p.c. in the same period. In the women's apparel and accessories stores, chains increased their proportion of the total from 13·2 p.c. in 1941 to 17·7 p.c. in 1951. Results, in detail, are shown in Table **11**.

A further analysis of this type of relationship is shown in Table **12**, in which tabulations are given for independent stores, chain stores, and department stores, classified by economic regions for 1941 and 1951. It is evident from this analysis that the general trend for Canada as a whole, toward a greater portion of the retail business of the country being accounted for by independent stores and a smaller portion by both chain and department stores, holds true for each region.

11.—Number of Independent and Chain Retail Stores and Sales, by Kind of Business, 1941 and 1951

Kind of Business	Stores		Sales		P.C. of Total Sales	
	1941	1951	1941	1951	1941	1951
	No.	No.	$'000	$'000		
Grocery Stores (without fresh meat)—						
Independents............................	21,145	21,902	226,081	575,831	85·0	92·6
Chains..................................	739	337	39,947	46,287	15·0	7·4
Totals, Grocery Stores (without fresh meat)..............................	**21,884**	**22,239**	**266,028**	**622,117**	**100·0**	**100·0**

11.—Number of Independent and Chain Retail Stores and Sales, by Kind of Business, 1941 and 1951—continued

Kind of Business	Stores		Sales		P.C. of Total Sales	
	1941	1951	1941	1951	1941	1951
	No.	No.	$'000	$'000		
Combination Stores (grocery stores with fresh meat)—						
Independents	5,304	11,286	168,140	710,360	55·8	55·6
Chains	797	866	133,211	566,444	44·2	44·4
Totals, Combination Stores (grocery stores with fresh meat)	**6,101**	**12,152**	**301,351**	**1,276,804**	**100·0**	**100·0**
General Stores—						
Independents	11,750	10,049	207,904	481,847	96·8	92·7
Chains	167	408	6,844	37,972	3·2	7·3
Totals, General Stores	**11,917**	**10,457**	**214,748**	**519,819**	**100·0**	**100·0**
Variety Stores—						
Independents	559	794	11,180	31,149	13·1	15·9
Chains	526	597	73,997	164,475	86·9	84·1
Totals, Variety Stores	**1,085**	**1,391**	**85,177**	**195,624**	**100·0**	**100·0**
Filling Stations—						
Independents	9,754	8,337	143,971	334,392	91·4	98·9
Chains	376	57	13,588	3,858	8·6	1·1
Totals, Filling Stations	**10,130**	**8,394**	**157,559**	**338,249**	**100·0**	**100·0**
Men's and Boys' Clothing and Clothing and Furnishings Stores—						
Independents	3,335	3,720	70,167	175,820	87·8	87·2
Chains	150	251	9,706	25,869	12·2	12·8
Totals, Men's and Boys' Clothing and Clothing and Furnishings Stores	**3,485**	**3,971**	**79,873**	**201,689**	**100·0**	**100·0**
Women's Apparel and Accessories Stores—						
Independents	5,181	5,834	84,623	213,185	86·8	82·3
Chains	327	523	12,899	45,846	13·2	17·7
Totals, Women's Apparel and Accessories Stores	**5,508**	**6,357**	**97,522**	**259,031**	**100·0**	**100·0**
Shoe Stores—						
Independents	1,217	1,637	27,640	73,165	62·8	65·6
Chains	457	605	16,398	38,323	37·2	34·4
Totals, Shoe Stores	**1,674**	**2,242**	**44,038**	**111,488**	**100·0**	**100·0**
Household Appliances and Radio Stores—						
Independents	1,236	2,370	27,286	162,624	59·5	77·4
Chains	412	419	18,609	47,614	40·5	22·6
Totals, Household Appliance and Radio Stores	**1,648**	**2,789**	**45,895**	**210,238**	**100·0**	**100·0**
Restaurants—[1]						
Independents	7,377	11,733	112,032	395,934	88·4	92·8
Chains	301	295	14,661	30,984	11·6	7·2
Totals, Restaurants[1]	**7,678**	**12,028**	**126,693**	**426,918**	**100·0**	**100·0**
Drug Stores (with and without soda fountain)—						
Independents	3,601	3,979	82,283	217,182	81·4	87·4
Chains	355	346	18,745	31,267	18·6	12·6
Totals, Drug Stores (with and without soda fountain)	**3,956**	**4,325**	**101,028**	**248,449**	**100·0**	**100·0**

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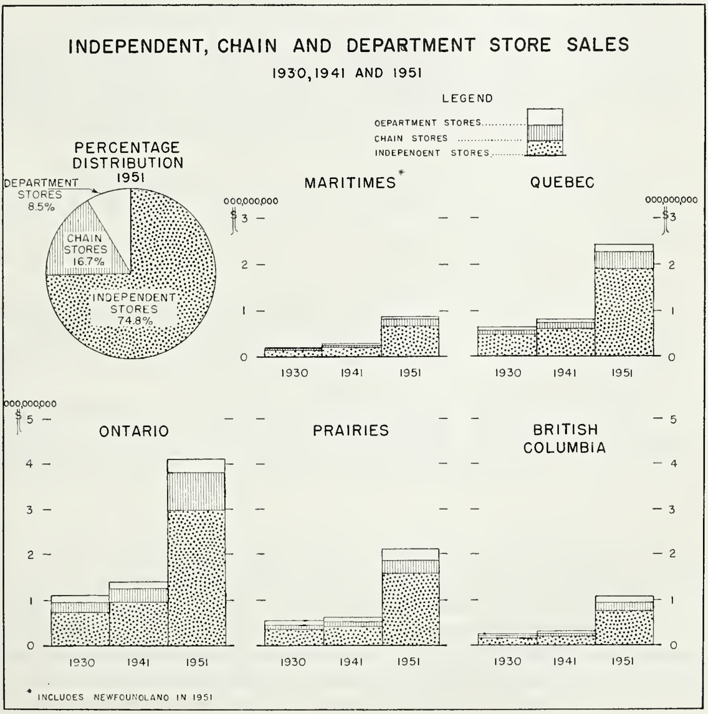
[1] Excludes refreshment booths and stands, and fish and chip shops.

11.—Number of Independent and Chain Retail Stores and Sales, by Kind of Business, 1941 and 1951—concluded

Kind of Business	Stores		Sales		P.C. of Total Sales	
	1941	1951	1941	1951	1941	1951
Tobacco Stores and Stands—						
Independents	4,033	2,114	36,412	60,872	84·2	77·7
Chains	206	216	6,816	17,419	15·8	22·3
Totals, Tobacco Stores and Stands	**4,239**	**2,330**	**43,228**	**78,291**	**100·0**	**100·0**
All Stores—						
Independents	129,320	143,532	2,797,902	8,877,036	81·4	83·3
Chains	8,011	8,094	643,000	1,775,744	18·6	16·7
Totals, All Stores	**137,331**	**151,626**	**3,440,902**	**10,652,780**	**100·0**	**100·0**



12.—Relative Positions of Independent, Chain and Department Stores, by Economic Divisions, 1941 and 1951

Year and Economic Division		Independent Stores		Chain Stores		Department Stores		Total Stores and Sales
		Stores and Sales	P.C. of Total	Stores and Sales	P.C. of Total	Stores and Sales	P.C. of Total	
1941								
Atlantic Provinces	No.	11,983	94·8	556	4·4	102	0·8	12,641
	$'000	201,222	71·1	52,890	18·7	28,700	10·2	282,812
Quebec	No.	38,232	96·3	1,446	3·6	34	0·1	39,712
	$'000	627,870	76·7	132,260	16·2	58,541	7·1	818,671
Ontario	No.	43,423	92·3	3,385	7·2	247	0·5	47,055
	$'000	960,025	68·2	295,444	21·0	151,508	10·8	1,406,977
Prairie Provinces	No.	24,644	92·9	1,795	6·8	90	0·3	26,529
	$'000	427,687	69·1	96,426	15·6	94,678	15·3	618,791
British Columbia	No.	10,455	92·9	767	6·8	31	0·3	11,253
	$'000	200,708	64·8	64,486	20·8	44,379	14·4	309,573
Totals	**No.**	**128,816**	**93·8**	**8,011**	5·8	**504**	**0·4**	**137,331**
	$'000	**2,420,096**	**70·3**	**643,000**	18·7	**377,806**	**11·0**	**3,440,902**
1951								
Atlantic Provinces	No.	16,921	95·8	611	3·5	136	0·7	17,668
	$'000	688,092	77·0	134,524	15·1	71,001	7·9	893,617
Quebec	No.	42,014	96·4	1,495	3·4	63	0·2	43,572
	$'000	1,912,410	78·5	359,274	14·7	165,229	6·8	2,436,913
Ontario	No.	46,358	92·5	3,472	6·9	289	0·6	50,119
	$'000	2,998,755	72·8	809,061	19·7	308,557	7·5	4,116,373
Prairie Provinces	No.	25,238	93·6	1,636	6·1	86	0·3	26,960
	$'000	1,598,569	75·7	282,068	13·4	230,746	10·9	2,111,383
British Columbia	No.	12,352	92·8	880	6·6	75	0·6	13,307
	$'000	769,082	70·3	190,817	17·4	134,596	12·3	1,094,495
Totals	**No.**	**142,883**	**94·2**	**8,094**	**5·3**	**649**	**0·4**	**151,626**
	$'000	**7,966,907**	**74·8**	**1,775,744**	**16·7**	**910,129**	8·5	**10,652,780**

Stores, when grouped according to the volume of annual sales, showed a wide and varied pattern. Almost 2,000 stores had less than $1,000 sales in 1951, compared with 8,995 stores in 1941; sales of these stores accounted for only 0·1 p.c. in 1951 of the Canada total compared with 0·2 p.c. in 1941. In number of establishments, the small store dominated the picture, 70 p.c. of all stores having sales of less than $50,000 in 1951. In contrast, stores with sales of $50,000 or over in 1951 accounted for only 30 p.c. of the total number of establishments, but made 63·5 p.c. of all sales in retail stores. Further details are shown in Table **13**.

13.—Retail Establishments grouped according to Annual Sales, 1941 and 1951

Group	Stores				Annual Sales			
	1941		1951		1941		1951	
	No.	p.c.	No.	p.c.	$'000	p.c.	$'000	p.c.
Sales—								
Less than $1,000.....	8,995	6·6	1,912	1·3	5,191	0·2	1,285	[1]
$1,000-$1,999.........	9,958	7·3	4,287	2·8	14,146	0·4	5,989	0·1
$2,000-$4,999.........	24,339	17·7	10,572	7·0	81,181	2·3	35,063	0·3
$5,000-$9,999.........	27,674	20·1	14,943	9·9	198,189	5·8	109,083	1·0
$10,000-$19,999.......	27,800	20·2	25,867	17·0	393,385	11·4	378,093	3·5
$20,000-$29,999.......	14,339	10·4	20,293	13·4	345,734	10·0	498,226	4·7
$30,000-$49,999.......	12,126	8·8	28,396	18·7	460,534	13·4	1,078,920	10·1
$50,000-$99,999.......	7,523	5·5	25,922	17·1	508,867	14·8	1,793,879	16·8
$100,000-$199,999.....	2,856	2·1	11,527	7·6	389,055	11·3	1,566,702	14·7
$200,000-$299,999..... $300,000-$499,999.....	1,308	1·0	5,282	3·5	395,024	11·5	1,600,421	15·1
$500,000-$999,999..... $1,000,000 or over....	413	0·3	2,625	1·7	649,597	18·9	3,585,118	33·7
Totals, All Groups...	**137,331**	**100·0**	**151,626**	**100·0**	**3,440,902**	**100·0**	**10,652,780**	**100·0**

[1] Less than 0·1 p.c.

In 1951, 56,875 or 37·6 p.c. of the retail stores in Canada had no paid employees, but these accounted for only 8 p.c. of total sales. Stores with fewer than 10 paid employees numbered 87,560 or 57·7 p.c. of the total in operation and had 51·2 p.c. of all sales. In comparison, stores with 10 or more employees were only 4·7 p.c. of the total number of establishments but had 40·5 p.c. of all sales.

14.—Retail Stores grouped according to Number of Employees, 1951

Group	Stores		Sales		Paid Employees				Payroll	
					Minimum		Maximum			
	No.	p.c.	$'000	p.c.	No.	p.c.	No.	p.c.	$'000	p.c.
Stores Reporting—										
No employees..........	56,875	37·6	883,143	8·3	—	—	3,895	0·6	12,940	1·4
1 employee............	38,435	25·3	1,273,151	12·0	38,595	8·5	54,871	9·1	53,232	5·8
2 employees............	19,580	12·9	1,029,326	9·7	39,160	8·6	52,613	8·7	64,365	7·1
3 “	11,011	7·3	796,762	7·5	33,033	7·3	44,041	7·3	58,384	6·4
4 “	6,697	4·4	631,594	5·9	26,788	5·9	35,171	5·8	48,841	5·3
5-9 “	11,837	7·8	1,716,569	16·1	74,959	16·5	98,172	16·3	154,370	17·0
10-19 employees........	4,447	2·9	1,244,438	11·7	57,974	12·7	76,236	12·6	124,282	13·7
20-49 “	2,074	1·4	1,245,029	11·7	60,880	13·4	80,081	13·3	135,374	14·9
50-90 . “	467	0·3	645,406	6·0	32,427	7·1	41,605	6·9	70,792	7·8
100 “ or over.	203	0·1	1,187.363	11·1	90,978	20·0	117,206	19·4	187,463	20·6
Totals, All Stores.....	**151,626**	**100·0**	**10,652,780**	**100·0**	**454,794**	**100·0**	**603,891**	**100·0**	**910,042**	**100·0**

In 1951, 60,000 of Canada's 151,000 retail stores did business on a cash basis, and had total sales of $2,888,489,100. The bulk of this trade was accounted for by the traditionally cash and carry businesses: restaurants, chain food stores, variety stores and drug stores. The important role which credit, both charge and instalment, has in retail selling is clearly shown in Table **15** and is particularly significant in such trades as the automotive group, department stores, clothing stores, and furniture and appliance stores.

15.—Retail Stores grouped by Cash Sales, Cash and Credit

	Kind of Business	All Stores		Stores Reporting Cash Sales Only	
		No.	Sales	No.	Sales
			$'000		$'000
	Food and Beverages—				
1	Grocery stores (without fresh meat)	21,706	595,229	6,971	163,166
2	Combination stores (grocery stores with fresh meat)	11,460	1,206,661	2,982	674,164
3	Meat markets	3,145	175,514	961	46,502
4	Restaurants	13,837	452,271	12,631	409,746
	Totals, Food and Beverage[1]	**65,134**	**3,232,312**	**34,983**	**1,952,343**
	General Merchandise—				
5	Department stores	111	910,129	4	4,768
6	Mail order offices or houses of department stores	538			
7	General merchandise stores	3,646	169,387	1,077	24,778
8	Variety stores	1,391	195,624	1,207	185,698
	Totals, General Merchandise[1]	**16,153**	**1,795,674**	**3,703**	**259,585**
	Automotive—				
9	Automotive dealers	2,576	956,041	60	6,105
10	Accessories, tire and battery shops	1,021	81,061	198	7,206
11	Garages	3,694	135,697	496	9,445
12	Filling stations	8,394	338,249	2,789	79,863
	Totals, Automotive[1]	**18,380**	**2,544,089**	**3,644**	**109,920**
	Apparel and Accessories—				
13	Men's and boys' clothing and clothing and furnishings stores	2,591	162,765	865	39,101
14	Family clothing and furnishings stores	2,686	192,962	980	39,157
15	Women's ready-to-wear stores	3,190	158,120	1,171	44,906
16	Furriers and fur stores	591	38,877	66	1,467
17	Family shoe stores	2,047	99,324	1,284	60,191
	Totals, Apparel and Accessories[1]	**16,283**	**783,322**	**7,440**	**257,111**
	Building Materials and Hardware—				
18	Lumber and building materials dealers	1,772	290,466	103	5,417
19	Lumber and building materials, coal and wood yards	421	67,145	9	1,187
20	Hardware stores	3,741	217,419	588	15,035
	Totals, Building Materials and Hardware[1]	**7,887**	**673,980**	**1,043**	**27,756**
	Furniture, Household Appliances, Radio and Home Furnishings—				
21	Furniture stores	1,583	136,726	123	4,342
22	Household appliance stores	1,797	131,234	122	2,563
23	Radio stores	538	17,352	113	1,120
	Totals, Furniture, Household Appliances, Radio and Home Furnishings[1]	**5,221**	**394,471**	**644**	**15,588**
	Drug and Health Appliance—				
24	Drug stores (without soda fountain)	3,825	208,068	1,640	83,242
25	Drug stores (with soda fountain)	500	40,381	214	17,062
	Totals, Drug and Health Appliance[1]	**4,712**	**257,276**	**2,054**	**103,322**
	Second-hand Stores	**1,244**	**23,139**	**841**	**12,591**
	Other Retail Stores—				
26	Fuel dealers (other than oil)	1,431	185,074	219	7,383
27	Ice dealers	296	5,596	184	1,442
28	Jewellery stores	2,610	104,567	749	10,762
29	Tobacco stores and stands	2,330	78,291	2,035	67,426
	Totals, Other Retail Stores[1]	**16,612**	**948,517**	**6,191**	**150,273**
	Totals, All Stores	**151,626**	**10,652,780**	**60,543**	**2,888,489**

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[1] Includes kinds of business for which separate figures are not shown.

Sales, and Those Not Reporting Cash and Credit Sales, 1951

Stores Reporting Both Cash and Credit Sales					Accounts Receivable Dec. 31		Stores Not Reporting Cash and Credit Sales		
No.	Sales	Cash Sales	Charge Sales	Instalment Sales	Charge Accounts	Instalment Accounts	No.	Sales	
	$'000	$'000	$'000	$'000	$'000	$'000		$'000	
8,623	313,992	204,046	109,946	—	12,778	—	6,112	118,072	1
6,450	454,363	286,080	168,283	—	16,871	—	2,028	78,134	2
1,471	104,922	74,383	30,539	—	3,431	—	713	24,091	3
325	18,311	15,590	2,721	—	337	—	881	24,214	4
18,695	**996,884**	**655,204**	**341,680**	—	**36,520**	—	**11,456**	**283,085**	
636	893,591	630,959	191,604	71,028	49,825	26,383	9	11,769	5 6
1,698	121,415	79,148	39,341	2,925	7,842	930	871	23,194	7
93	[2]	[2]	[2]	[2]	[2]	[2]	91	2,264	8
8,606	**1,396,044**	**943,990**	**375,227**	**76,828**	**83,040**	**28,234**	**3,844**	**140,046**	
1,405	588,807	224,749	169,398	194,660	21,634	9,448	1,111	361,129	9
488	58,127	21,521	29,289	7,318	4,608	1,818	335	15,727	10
1,362	66,922	38,610	26,969	1,343	4,924	53	1,836	59,330	11
2,994	166,656	120,990	44,389	1,277	6,005	28	2,611	91,730	12
7,852	**1,624,005**	**709,307**	**467,772**	**446,926**	**61,045**	**22,992**	**6,884**	**810,164**	
1,329	108,545	77,307	27,250	3,988	5,486	971	397	15,119	13
1,175	134,401	89,295	35,589	9,527	8,951	2,812	531	19,404	14
1,451	94,771	59,569	30,037	5,165	5,312	1,181	568	18,443	15
350	28,664	12,200	9,372	7,092	2,426	2,465	175	8,746	16
469	30,243	25,790	4,452	2	780	1	294	8,891	17
5,815	**437,357**	**292,280**	**118,715**	**26,361**	**25,097**	**7,635**	**3,028**	**88,854**	
1,455	267,401	82,310	183,053	2,039	32,508	707	214	17,648	18
378	63,266	16,938	46,016	312	8,510	24	34	2,692	19
2,477	176,836	106,519	65,494	4,823	14,684	978	676	25,549	20
5,491	**588,851**	**239,110**	**337,277**	**12,464**	**63,531**	**2,712**	**1,353**	**57,373**	
1,186	117,769	40,299	29,758	47,712	10,103	17,919	274	14,615	21
1,309	112,794	45,312	23,486	43,995	4,545	11,376	366	15,877	22
301	13,664	6,290	3,114	4,260	593	1,006	124	2,568	23
3,621	**333,206**	**128,566**	**81,415**	**123,224**	**20,632**	**40,190**	**956**	**45,677**	
1,698	104,991	89,940	15,051	—	2,447	—	487	19,836	24
249	21,492	19,152	2,340	—	395	—	37	1,827	25
2,073	**131,267**	**112,321**	**18,499**	**446**	**3,016**	**499**	**585**	**22,687**	
214	**6,558**	**4,135**	**2,055**	**368**	**492**	**78**	**189**	**3,990**	
947	152,991	52,931	96,270	3,790	17,151	338	265	24,700	26
59	3,376	1,876	1,491	10	240	9	53	779	27
1,334	82,965	47,853	24,885	10,227	6,314	2,325	527	10,840	28
147	7,331	5,861	1,471	—	272	—	148	3,534	29
7,353	**650,770**	**329,568**	**293,619**	**27,583**	**55,428**	**5,394**	**3,068**	**147,474**	
59,720	**6,164,941**	**3,414,482**	**2,036,260**	**714,199**	**348,801**	**107,284**	**31,363**	**1,599,350**	

[2] Figures withheld to avoid disclosure of individual operations.

In addition to tabulating the total sales by kind of business (as outlined in previous tables), the Census of Distribution analyzed commodities handled by each kind of business, and estimated the total value of the main commodities sold through Canada's retail stores. Table 16 shows the distribution of total sales of $10,652,780,000, in fairly detailed groups of commodities. Two items predominated in 1951: $2,407,842,000 worth of food and kindred products sold to consumers was 24 p.c. of all items sold in retail outlets, and $2,302,480,000 worth of automotive commodities (new and used cars, gas, oil, parts and accessories, etc.) accounted for 22 p.c. of all commodities sold. Clothing (men's, women's, children's) and shoes accounted for sales of $1,300,800,000, or 12·5 p.c. of all commodities. When used in conjunction with the general tabulations, this commodity information becomes significant in any study of distribution problems in Canada.

16.—Estimated Sales of Commodities in Retail Stores, 1951

Commodity	Estimated Sales	P.C. of Total
	$'000	
Food and kindred products	2,407,842	24·0
Automotive commodities	2,302,480	22·0
Clothing, women's, misses' and children's	674,917	6·5
Alcoholic beverages	491,902	4·7
Clothing and furnishings, men's and boys'	418,495	4·0
Receipts from sales of meals and lunches	408,875	3·9
Building materials	341,026	3·2
Fuel and ice	258,216	2·4
Farm and garden equipment and supplies	234,174	2·2
Drugs and drug sundries	233,811	2·2
Shoes and other footwear	207,438	2·0
Electrical appliances and supplies	197,799	1·9
Hardware	195,150	1·8
Cigars, cigarettes and tobacco	189,666	1·8
Furniture	180,846	1·7
Dry goods and notions	168,997	1·6
Hay, straw, grain and feed	143,962	1·3
Household supplies	129,749	1·2
Paper goods, stationery and books	96,054	0·9
House furnishings	94,692	0·9
Jewellery, silverware, clocks and watches	93,719	0·8
Paints, varnishes, glass and wallpaper	49,389	0·5
Radios, record players and equipment	44,249	0·4
Toys, games and small wheel goods	33,088	0·3
Second-hand merchandise	32,227	0·3
Sporting goods	26,349	0·2
Non-electrical appliances and supplies	16,589	0·2
Musical instruments and accessories	13,452	0·1
Cameras and photographic equipment	12,130	0·1
Bicycles, motorcycles and parts	11,463	0·1
Luggage and leather goods	9,214	[1]
Professional and scientific appliances, instruments and equipment	2,351	[1]
Office and store equipment and furniture	871	[1]
Miscellaneous merchandise	713,930	6·8
Total Sales of Commodities in Retail Stores	10,435,112	100·0
Add: Receipts from repairs and services	217,668	...
Total Sales of Retail Stores	**10,652,780**	**100·0**

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[1] Less than 0·05 p.c.

Service Establishments.—Service establishments as defined in the 1951 Census of Distribution included all those places of business whose major source of gross income (annual turnover) was derived from the rendering of services, as opposed to the sale of merchandise. The following types of service were covered: amusement and recreational, such as motion-picture theatres and bowling alleys; personal services such as barber shops and shoe-repair shops; certain business services such as advertising agencies and window-display services; repair services such as auto repair, radio repair and watch repair; burial services; photography, commercial and portrait; hotels and tourist camps; and other services such as cold-storage locker rentals and taxis.

The Census excluded the following: professional services such as those services rendered by doctors, lawyers and accountants; trade services such as those services rendered by carpenters, plumbers and electricians; public utilities such as gas, electricity and water; services not carried on in an established place of business, such as domestic service in a private home; and transportation services such as air, rail and boat (except taxis operating from stands).

The total number of service establishments enumerated in the 1951 Census was 58,748, and their total receipts were $1,085,757,900. Included in these 1951 figures were 8,741 establishments in the hotel and tourist camp group, with receipts of $370,911,200, which were not included in the 1941 figures. Excluding this group of service establishments, the 1951 results showed a moderate increase of 736 establishments, but receipts increased by $460,168,700.

All groups of establishments showed very large increases in dollar volume in 1951 compared with 1941, as shown in Table **17**. Two groups, however, showed declines in number of establishments—the undertaking and funeral services group and the personal services group. In the latter group declines were shown in the number of barber shops, beauty parlours, shoe-repair shops and shoe-shine parlours and were common to all provinces.

Service establishments provided employment for a minimum of 143,800, and a maximum of 190,048, employees in 1951, and a payroll of $259,709,200. Excluding hotels and tourist camps, the services payroll increased $114,228,000 over the 1941 payroll of $62,984,000.

17.—Service Establishments, by Province and by Kind of Business, 1951

Province and Kind of Business	Establishments	Receipts	Working Proprietors	Paid Employees Minimum	Paid Employees Maximum	Payroll
	No.	$'000	No.	No.	No.	$'000
Province						
Newfoundland	650	7,221	643	1,099	1,287	1,589
Prince Edward Island	367	2,793	389	559	707	621
Nova Scotia	2,050	22,554	1,993	4,151	5,571	5,540
New Brunswick	1,600	18,719	1,545	2,896	3,768	3,869
Quebec	16,501	280,146	16,929	37,369	47,550	63,331
Ontario	20,540	415,313	20,433	56,782	75,914	106,858
Manitoba	3,117	66,656	3,189	8,669	11,096	15,197
Saskatchewan	3,771	57,105	3,758	6,432	8,032	10,042
Alberta	4,227	94,337	4,091	10,580	15,214	20,825
British Columbia	5,848	118,452	5,662	15,065	20,634	31,302
Yukon and Northwest Territories	77	2,463	72	198	275	536
Canada	**58,748**	**1,085,758**	**58,704**	**143,800**	**190,048**	**259,709**
Kind of Business						
Amusement and Recreation—						
Regular theatres	1,799	100,371	1,032	13,366	14,664	17,112
Bowling alleys and pool halls	1,915	18,675	2,000	2,823	5,647	3,976
Other amusement and recreation establishments	1,850	31,928	989	5,653	10,060	8,246
Totals, Amusement and Recreation	**5,564**	**150,973**	**4,021**	**21,842**	**30,371**	**29,335**

17.—Service Establishments, by Province and by Kind of Business, 1951—continued

Kind of Business	Establishments	Receipts	Working Proprietors	Paid Employees		Payroll
				Minimum	Maximum	
	No.	$'000	No.	No.	No.	$'000
Business Services—						
Advertising services	815	39,447	671	4,628	6,116	16,499
Other business services	973	77,584	663	6,508	7,994	16,996
Totals, Business Services	**1,788**	**117,031**	**1,334**	**11,136**	**14,110**	**33,494**
Personal Services—						
Barber shops and beauty parlours—						
Barber shops	7,285	25,740	7,555	3,002	3,359	5,240
Barber and beauty parlours combined	280	1,957	292	380	481	670
Beauty parlours	5,172	22,143	5,264	4,313	5,403	6,142
Laundries—						
Laundries, Chinese	979	3,619	1,325	285	312	285
Laundries, hand (other than Chinese)	203	1,399	229	265	340	293
Laundries, power with cleaning and dyeing	174	28,687	96	9,056	10,618	15,880
Cleaning and Dyeing—						
Dry cleaning and dyeing plants (cleaning, except rug)	1,040	43,426	1,060	11,469	14,332	22,373
Valet service, pressing and repair shops	1,367	7,965	1,463	1,062	1,275	1,402
Fur cleaning, repair and storage	154	2,065	156	250	422	545
Shoe Repair and Service Shops—						
Shoe repair shops	4,268	16,424	4,368	1,196	1,462	1,869
Shoe-shine parlours	230	840	255	189	265	178
Other personal services	2,337	49,811	1,378	7,537	8,920	12,526
Totals, Personal Services	**23,489**	**204,077**	**23,441**	**39,004**	**47,189**	**67,402**
Repair Services—						
Automobile Repair and Service Shops—						
Automobile service garages	3,493	56,973	3,813	3,647	4,536	7,285
Battery, ignition and electrical repair shops	116	1.948	131	197	231	374
Body repairs and paint shops	832	15,787	944	1,677	2,241	4,096
Parking lots (outdoors)	180	1,321	100	232	258	311
Storage garages	21	1,173	15	133	155	265
Tire and brake shops	174	4,710	186	265	355	562
Washing and polishing	47	1,507	51	252	456	604
Other automotive service shops	251	3,969	261	382	522	962
Blacksmith Shops—						
Blacksmith and general repair shops	2,818	8,536	2,941	534	667	732
Horse-shoeing shops	136	242	137	12	13	14
Other Repair Shops—						
Armature rewinding and electric motor repair shops	141	2,855	150	321	422	1,031
Bicycle and motorcyle repair shops	224	993	235	49	59	52
Harness repair shops	137	423	138	15	16	17
Locksmiths, gunsmiths and tool and cutlery repair shops	275	1,764	291	131	158	278
Radio and electrical repair and service shops	1,051	9,387	1,094	639	848	1,441
Upholstery and furniture repair shops	686	6,382	767	651	904	1,251
Watch, clock and jewellery repairs	636	2,898	662	214	251	410
Miscellaneous repair shops	936	12,122	988	1,051	1,539	2,704
Totals, Repair Services	**12,154**	**132,988**	**12,904**	**10,402**	**13,631**	**22,387**
Undertaking and Funeral Services—						
Funeral directors	1,045	29,325	986	1,963	2,247	4,829
Undertaking and furniture	46	1,361	56	68	78	99
Totals, Undertaking and Funeral Services	**1,091**	**30,686**	**1,042**	**2,031**	**2,325**	**4,928**

17.—Service Establishments, by Province and by Kind of Business, 1951—concluded

Kind of Business	Establishments	Receipts	Working Proprietors	Paid Employees		Payroll
				Minimum	Maximun	
	No.	$'000	No.	No.	No.	$'000
Photography—						
Commercial photographers	106	3,417	105	402	668	1,436
Portrait photographers	1,057	10,426	1,049	1,148	1,555	2,086
Developing, printing and enlarging	126	3,346	130	401	597	831
Totals, Photography	**1,289**	**17,189**	**1,284**	**1,951**	**2,820**	**4,353**
Hotels and Tourist Camps—						
Full year hotels, licensed	3,292	311,321	2,916	37,064	44,539	68,461
Full year hotels, non-licensed	1,036	25,442	1,059	5,057	6,546	7,464
Seasonal hotels, licensed	209	10,018	194	1,238	5,200	2,613
Seasonal hotels, non-licensed	1,005	11,620	1,024	3,197	7,777	2,560
Tourist courts, cabins, motels, etc.	3,040	11,942	3,235	1,982	3,114	1,310
Other tourist camps	159	568	175	115	229	89
Totals, Hotels and Tourist Camps	**8,741**	**370,911**	**8,603**	**48,653**	**67,405**	**82,497**
Miscellaneous Services	**4,632**	**61,902**	**6,075**	**8,781**	**12,197**	**15,313**
Totals, All Establishments	**58,748**	**1,085,758**	**58,704**	**143,800**	**190,048**	**259,709**

Subsection 2.—Annual Statistics of Merchandising and Service Establishments*

Current statistics on merchandising and service establishments are, in general, based on the results of the Decennial Census of Distribution. The results of the 1951 Census are shown in considerable detail in Subsection 1. Following completion of a Census, it is necessary to select new sample panels from which to make estimates for certain of the larger continuing surveys such as retail trade, wholesale trade and retail consumer credit. It is also necessary to carry out extensive revisions to bring the past estimates into agreement with the Census base and to continue this revision to the post-census estimates currently produced. At time of writing (September 1954), such new samples and revisions were not completed, so that this Subsection will deal only with certain "full-coverage" surveys not affected by post-census sampling and revising procedures. The latest available annual data on retail trade, wholesale trade and consumer credit are contained in the 1954 Year Book, pp. 928-934.

Operating Results of Retail Stores.—Operating results, profit and loss and balance-sheet data, are not covered by the Census of Distribution but are collected in a biennial survey, alternated with a similar study of certain wholesale and retail chain store trades. The 1952 retail survey gives figures for 20 major trades of the independent type of retail store. Latest results for wholesalers and retail chain stores are given in the 1954 Year Book, pp. 930 and 933, respectively.

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* Revised in the Merchandising and Services Section, Industry and Merchandising Division, Dominion Bureau of Statistics.

18.—Operating Ratios of Independent Retail Stores, by Kind of Business, 1952

NOTE.—All figures except stock turnover are percentages of net sales.

Kind of Business	Cost of Goods Sold	Gross Margin	Total Operating Expenses[1]	Salaries and Wages[2]	Occupancy Expenses[3]	Net Profit before Income Tax[4]	Stock Turnover[5]
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	No.
Unincorporated							
Grocery	86·2	13·8	8·6	3·3	2·6	5·2	10·1
Combination	85·4	14·6	10·5	4·9	2·4	4·1	13·8
Meat	82·5	17·5	11·4	5·1	2·8	6·1	39·1
Confectionery	81·2	18·8	11·3	4·3	4·8	7·5	12·0
Fruit and vegetables	82·5	17·5	11·9	4·4	3·8	5·6	18·4
Men's clothing	73·4	26·6	16·5	6·9	4·8	10·1	2·3
Family clothing	75·6	24·4	15·5	7·0	4·4	8·9	2·3
Women's ready-to-wear	73·2	26·8	18·8	8·2	5·8	8·0	3·7
Family shoe	72·3	27·7	16·9	7·7	5·4	10·8	1·9
General stores	85·4	14·6	8·9	4·0	2·4	5·7	4·2
Furniture	72·2	27·8	19·5	7·3	4·9	8·3	2·7
Household appliance and radio	73·6	26·4	18·6	8·7	3·5	7·8	4·2
Hardware	74·1	25·9	15·5	7·3	4·0	10·4	2·4
Restaurants	61·1	38·9	31·3	18·2	9·0	7·6	22·5
Fuel dealers	79·6	20·4	15·8	3·5	2·1	4·6	11·3
Drug	70·9	29·1	17·1	8·7	4·4	12·0	3·5
Jewellery	60·5	39·5	25·3	11·0	7·0	14·2	1·4
Tobacco	83·5	16·5	9·7	4·1	3·9	6·8	9·1
Filling stations	79·9	20·1	14·2	7·7	4·2	5·9	23·5
Garages	70·1	29·9	21·6	12·9	5·1	8·3	11·8
Incorporated							
Men's clothing	70·7	29·3	26·3	14·7	5·8	3·0	2·2
Family clothing	70·2	29·8	26·3	14·7	4·7	3·5	3·0
Women's ready-to-wear	70·7	29·3	26·5	15·3	6·0	2·8	4·6
Family shoe	70·0	30·0	26·8	15·5	6·0	3·2	2·0
Hardware	72·7	27·3	24·5	15·3	4·1	2·8	2·3
Fuel dealers	78·0	22·0	20·4	6·1	1·9	1·6	10·0
Drug	65·9	34·1	28·7	18·8	5·2	5·4	3·1
Jewellery	58·2	41·8	38·5	20·8	7·8	3·3	1·4

[1] Includes salaries and wages and occupancy expenses. [2] Excludes delivery or proprietors' salaries. [3] Includes taxes and insurance, light, heat and power, repairs, maintenance, depreciation (except on delivery equipment) and rentals on rented premises. [4] Includes, for unincorporated stores, proprietors' salaries or withdrawals. [5] Times per year—cost of goods sold, divided by average of beginning and year-end inventories.

Theatres.—The Canadian public spent a total of $118,434,481 on motion-picture entertainment during 1952 of which $12,975,298 was amusement taxes. Summary statistics of motion-picture theatre operations are presented in Table **19**. The provincial distribution shown in Table **20** does not include itinerant operators.

19.—Summary Statistics of Motion-Picture Theatre Operations, 1952

Item		Regular Theatres	Drive-in Theatres	Community Enterprises	Itinerant Operators	Total
Establishments	No.	1,843	104	657	812	3,416
Receipts (excluding taxes)	$	98,851,349	4,409,426	1,702,824	495,584	105,459,183
Amusement taxes	$	12,308,148	540,390	96,314	30,446	12,975,298
Paid admissions	No.	247,732,717	8,379,586	5,363,564	1,487,420	262,963,287

20.—Motion-Picture Theatres and Receipts, by Province, 1941, 1949 and 1950-52

Note.—Itinerant operators are not included in these figures. Receipts are exclusive of amusement taxes.

Province	1941		1949[1]		1950[1]		1951[1]		1952[1]	
	No.	Receipts	No.	Receipts	No.	Receipts	No.	Receipts	No.	Receipts
		$		$		$		$		$
Newfoundland	...	...	56	895,857	63	916,634	71	1,202,077	86	1,269,248
P.E. Island	6	141,317	20	296,851	18	293,807	17	323,413	17	348,887
Nova Scotia	61	2,195,599	84	3,113,058	85	3,269,653	86	3,475,104	88	3,772,822
New Brunswick	39	1,102,265	67	2,055,491	66	2,064,199	71	2,320,390	72	2,618,307
Quebec	202	8,047,022	637	19,765,969	583	21,644,261	617	23,043,006	646	25,449,414
Ontario	410	18,757,372	626	32,951,071	609	35,557,030	625	40,139,582	644	42,806,986
Manitoba	111	2,475,949	181	4,432,887	166	4,426,997	165	4,897,805	175	5,235,192
Saskatchewan	145	1,673,313	489	4,120,512	391	4,001,268	387	4,386,055	386	5,345,231
Alberta	144	2,257,115	311	5,516,078	262	5,831,685	274	6,650,644	275	7,754,465
British Columbia[2]	122	4,145,945	228	7,945,072	206	8,244,218	209	9,395,264	215	10,363,047
Canada	**1,240**	**40,795,897**	**2,699**	**81,092,846**	**2,449**	**86,249,752**	**2,522**	**95,833,340**	**2,604**	**104,963,599**

[1] Includes, in addition to regular theatres, establishments in which motion-picture entertainment is provided by community organizations such as churches, lodges, Boards of Trade etc., and drive-in theatres. In 1949 such halls numbered 469, their receipts $1,140,307, and drive-in theatres numbered 30, and had receipts of $1,392,760; in 1950, 586 halls had receipts of $1,251,311 and 62 drive-in theatres had receipts of $2,290,679; in 1951, 632 halls had receipts of $1,499,560 and 82 drive-in theatres had receipts of $3,347,670; and in 1952, 657 halls had receipts of $1,702,824 and 104 drive-in theatres had receipts of $4,409,426. [2] Includes the Yukon and Northwest Territories.

Power Laundries, Cleaning and Dyeing Plants.—The value of work performed by 307 power laundries and 991 dry-cleaning plants operating in 1952 totalled $105,331,139. The $51,644,977 paid in salaries and wages to 28,738 employees during the year, accounted for almost one-half of total receipts.

21.—Statistics of Power Laundries, Dry-Cleaning and Dyeing Plants, 1941 and 1947-52, and by Province, 1952

Year and Province	Plants	Employees[1]	Salaries and Wages	Cost of Materials	Value of Work Performed
	Power Laundries				
	No.	No.	$	$	$
1941	237	11,844	10,120,662	2,348,740	19,816,895
1947	244	13,950	16,357,072	3,560,120	30,459,393
1948	294	13,923	18,737,302	4,138,029	35,360,996
1949[2]	332	14,240	20,408,336	4,485,436	38,659,596
1950	323	14,310	20,976,430	4,811,682	40,586,942
1951	317	14,079	22,248,517	..	44,053,442
1952					
Newfoundland and P.E. Island	5	94	116,293	22,190	254,459
Nova Scotia	15	437	588,066	134,577	1,287,966
New Brunswick	13	455	617,797	145,980	1,169,835
Quebec	76	4,254	7,127,848	1,816,306	13,599,967
Ontario	115	4,877	8,528,010	2,534,591	16,563,099
Manitoba	10	561	1,027,267	246,452	1,815,421
Saskatchewan	9	344	631,257	143,838	1,194,693
Alberta	17	811	1,541,285	350,906	2,946,510
British Columbia[3]	47	2,089	4,318,230	748,929	8,020,740
Canada, 1952	**307**	**13,922**	**24,496,053**	**6,143,769**	**46,852,690**

For footnotes, *see* end of table.

21.—Statistics of Power Laundries, Dry-Cleaning and Dyeing Plants, 1941 and 1947-52, and by Province, 1952—concluded

Year and Province	Plants	Employees[1]	Salaries and Wages	Cost of Materials	Value of Work Performed
	DRY-CLEANING AND DYEING PLANTS				
	No.	No	$	$	$
1941	363	6,554	6,125,635	1,433,790	12,678,275
1947	530	10,906	14,144,464	3,041,506	28,584,285
1948	787	11,953	17,140,254	4,400,688	36,620,948
1949[2]	905	12,886	20,107,095	4,939,685	42,574,449
1950	919	13,450	21,704,698	5,378,564	46,249,622
1951	981	13,933	23,850,119	..	52,798,415
1952					
Newfoundland and P.E. Island	15	243	403,519	111,080	952,818
Nova Scotia	36	553	820,753	209,179	1,743,448
New Brunswick	30	272	420,343	126,534	1,059,761
Quebec	183	3,395	6,077,825	1,643,847	12,963,206
Ontario	416	6,376	12,169,109	2,838,334	26,022,586
Manitoba	46	1,161	2,104,423	458,348	3,996,635
Saskatchewan	63	576	1,052,075	287,489	2,622,594
Alberta	96	1,099	1,816,985	488,177	4,214,951
British Columbia[3]	106	1,141	2,283,892	547,367	4,902,450
Canada, 1952	**991**	**14,816**	**27,148,924**	**6,710,355**	**58,478,449**

[1] Includes salaried employees and wage-earners. [2] Newfoundland included from 1949. [3] Includes the Yukon Territory and the Northwest Territories.

Hotels.—The 1952 receipts of the 5,157 hotels in Canada amounted to $391,936,000. These receipts comprised $201,759,000 from the sale of beer, wine and liquor, $89,879,000 from room rentals, $67,269,000 from the sale of meals and $33,029,000 from other sources.

22.—Hotels and Total Receipts, by Province, 1941, 1951 and 1952

Province	1941			1951			1952		
	Hotels	Rooms	Receipts	Hotels	Rooms	Receipts	Hotels	Rooms	Receipts
	No.	No.	$'000	No.	No.	$'000	No.	No.	$'000
Newfoundland	...	...	...	27	811	1,989	27	779	2,283
P.E. Island	38	592	249	24	634	592	24	648	581
Nova Scotia	226	3,663	2,896	155	4,050	5,539	146	3,924	5,928
New Brunswick	171	3,570	1,807	109	3,265	3,644	103	3,214	3,819
Quebec	1,556	30,883	28,647	1,441	37,970	85,293	1,540	39,741	93,679
Ontario	1,762	40,388	66,076	1,495	45,118	116,547	1,489	46,459	125,488
Manitoba	278	7,350	7,953	276	7,588	25,892	285	7,985	27,691
Saskatchewan	595	11,635	9,297	536	12,001	29,886	530	12,015	34,790
Alberta	433	12,918	14,218	445	14,186	45,038	449	14,206	49,857
British Columbia[1]	587	17,981	16,345	584	20,818	42,862	564	20,644	47,820
Canada	**5,646**	**128,980**	**147,488**	**5,092**	**146,441**	**357,282**	**5,157**	**149,615**	**391,936**

[1] Includes the Yukon and Northwest Territories.

Farm Implement Sales.—Sales of new implements and equipment at the wholesale price level amounted to $250,277,241 in 1952 approximately 6 p.c. higher than in 1951. This figure represents manufacturers' and importers' sales which, at the retail level, were estimated at $307,000,000. Sales of new repair parts amounted to $31,231,946 at the wholesale level or an estimated $42,000,000 at the retail price. These repair parts are not included with the amounts shown for new implements and equipment.

23.—Farm Implement and Equipment Sales, by Province, 1951 and 1952

NOTE.—Values at wholesale prices.

Province	1951		1952		P.C. Change 1951-52
	Amount	P.C. of Total	Amount	P.C. of Total	
	$		$		
Atlantic Provinces	6,889,061	2·9	9,118,551	3·6	+32·3
Quebec	23,816,008	10·1	23,745,129	9·5	−0·3
Ontario	58,736,885	24·9	51,448,643	20·6	−12·4
Manitoba	31,698,984	13·5	31,578,047	12·6	−0·4
Saskatchewan	61,147,757	26·0	75,859,527	30·3	+24·1
Alberta	48,267,092	20·5	53,505,361	21·4	+10·9
British Columbia	5,064,558	2·1	5,021,983	2·0	−0·8
Totals	**235,620,345**	**100·0**	**250,277,241**	**100·0**	**+6·2**

Separate sales figures for different types of equipment are presented in Table 24.

24.—Sales of New Farm Implements and Equipment in Canada and in the Prairie Provinces, by Type, 1951 and 1952

NOTE.—Values are mainly at wholesale prices.

Type	Canada			Prairie Provinces			
	1951	1952	P.C. Change 1951-52	1951	1952	P.C. Change 1951-52	P.C. of Canada Total, 1952
	$	$		$	$		
Planting, seeding and fertilizing machinery	9,516,447	9,150,510	−3·8	4,428,452	4,448,216	+0·4	48·6
Ploughs	15,454,118	18,234,921	+18·0	10,778,226	13,989,013	+29·8	76·7
Tilling, cultivating and weeding machinery	12,507,988	10,137,619	−19·0	8,130,469	5,903,720	−27·4	58·2
Haying machinery	14,844,424	17,230,060	+16·1	5,463,840	5,965,558	+9·2	34·6
Harvesting machinery	58,641,340	74,336,442	+26·8	50,478,809	65,041,763	+28·8	87·5
Machines for preparing crops for market or use	11,381,657	11,324,459	−0·5	5,671,628	6,760,491	+19·2	59·7
Tractors and engines	92,661,775	89,991,854	−2·9	49,811,432	52,897,416	+6·2	58·8
Spraying and dusting equipment	1,986,205	1,688,363	−15·0	1,169,136	850,370	−27·3	50·4
Farm wagons, trucks and sleighs	2,483,968	2,690,525	+8·3	1,078,922	1,221,104	+13·2	45·4
Water systems and pumps	5,938,424	6,202,934	+4·5	1,390,435	1,379,605	−0·8	22·2
Dairy machinery and equipment	3,397,615	3,010,878	−11·4	761,554	717,762	−5·8	23·8
Barn equipment	2,313,542	3,115,541	+34·7	474,264	675,499	+42·4	21·7
Poultry-farm equipment	532,344	454,845	−14·6	122,893	186,428	+51·7	41·0
Miscellaneous farm equipment	3,960,498	2,708,290	−31·6	1,353,773	905,990	−33·1	33·5
Totals	**235,620,345**	**250,277,241**	**+6·2**	**141,113,833**	**160,942,935**	**+14·0**	**64·3**

Sales of New Motor-Vehicles.—The post-war upward trend in new motor-vehicle sales continued in 1953 when 462,526 new vehicles were sold for $1,162,471,000. The increase over 1952 was accounted for by passenger cars only, sales of commercial vehicles in 1953 showing a decline of over 5,000 in number and $14,000,000 in value from the previous year.

25.—Retail Sales of New Motor-Vehicles, 1939-53

Year	Passenger Cars		Trucks and Buses		Totals	
	No.	$	No.	$	No.	$
1939	90,054	97,131,128	24,693	28,836,393	114,747	125,967,521
1940	101,789	114,928,833	28,763	33,916,445	130,552	148,845,278
1941	83,650	108,907,312	34,432	43,008,207	118,082	151,915,519
1942-45	..	..	..	..	..	..
1946	77,742	120,325,496	42,302	73,003,509	120,044	193,329,005
1947	159,205	283,190,390	71,050	133,047,105	230,255	416,237,495
1948	145,655	282,903,958	75,645	156,313,030	221,300	439,216,988
1949	202,318	412,297,863	84,023	176,426,822	286,341	588,724,685
1950	324,903	661,673,944	104,792	223,995,095	429,695	885,669,039
1951	275,686	683,182,846	109,962	266,976,665	385,648	950,159,511
1952	292,095	725,167,630	108,682	277,448,211	400,777	1,002,615,841
1953	359,172	899,726,000	103,354	262,745,000	462,526	1,162,471,000

Sales Financing.—The financing of retail instalment sales increased considerably in 1953, reaching a new high level of $943,000,000. This represents the amount financed by sales finance companies. Balances outstanding on their books at the end of the year totalled $697,000,000 compared with $540,000,000 at the end of 1952.

26.—Retail Instalment Paper Purchased and Balances Outstanding, by Class of Goods and Province, 1941 and 1951-53

(Millions of Dollars)

Item	Paper Purchased				Balances Outstanding Dec. 31—			
	1941	1951	1952	1953	1941	1951	1952	1953
Class of Goods								
Consumer Goods—								
New passenger cars	23	114	195	252	..	80	130	195
Used passenger cars	44	141	282	321	..	80	169	216
Radio and television	2	5	21	38	..	3	15	29
Household appliances	5	15	50	64	..	9	31	46
Furniture	[1]	4	9	14	..	3	7	10
Other	3	20	34	25	..	11	21	16
Totals, Consumer Goods	77	299	591	714	49	186	373	512
Commercial and Industrial—								
New commercial vehicles	11	82	98	90	..	64	77	78
Used commercial vehicles	7	46	64	63	..	31	43	46
Other	5	40	66	76	..	32	47	61
Totals, Commercial and Industrial	23	168	228	229	16	127	167	185
Totals, Retail Financing	**100**	**467**	**819**	**943**	**65**	**313**	**540**	**697**
Province								
Atlantic Provinces	7	34	62	73	4	23	40	53
Quebec	16	102	172	195	10	71	113	146
Ontario	48	177	322	379	30	114	210	274
Manitoba	5	24	39	44	3	16	26	33
Saskatchewan	6	29	47	52	5	20	33	40
Alberta	9	55	105	119	6	39	73	93
British Columbia	9	46	71	81	7	30	45	58

[1] Included in "Other".

During 1953, the increase in the number of new motor-vehicles financed by sales finance companies did not keep pace with the number sold. In 1952, 43 p.c. of new vehicles sold were financed by these companies; in 1953 the ratio declined to 41 p.c.

27.—Sales and Financing of New Motor-Vehicles (Passenger and Commercial), Selected Years, 1939-53

Year	Motor-Vehicles Sold	Motor-Vehicles Financed	P.C. of Total Sales Financed		Average Financed Value
			Number	Value	
	No.	No.		$	$
1939	114,747	37,230	32·5	22·1	746
1941	118,082	41,032	34·7	23·0	850
1946	120,044	22,866	19·0	14·5	1,224
1947	230,255	46,700	20·3	15·7	1,401
1948	221,300	51,867	23·4	16·8	1,423
1949[1]	286,341	81,502	28·5	19·6	1,417
1950	429,695	135,304	31·5	21·6	1,415
1951	385,648	126,255	32·7	20·1	1,514
1952	400,777	172,587	43·1	29·2	1,695
1953	462,526	189,052	40·9	29·4	1,810

[1] Newfoundland included from 1949.

Advertising Agencies.—Total billings of advertising agencies in 1952 amounted to $121,666,983 of which $120,628,827 was commissionable billings and the rest was from other services. Gross revenue totalled $19,060,261 compared with $17,015,496 in 1951.

28.—Financial Statistics of Advertising Agencies, 1947-52

Year	Amount of Billings			Gross Revenue	
	Commissionable Billings	Other	Total	Amount	P.C. of Total Billings
	$	$	$	$	
1947	64,422,777	171,897	64,594,674	10,091,772	15·6
1948	73,543,766	218,447	73,762,213	11,553,459	15·7
1949	86,450,968	291,502	86,742,470	13,526,336	15·6
1950	95,566,600	653,944	96,220,544	15,012,672	15·6
1951	107,461,752	951,833	108,413,585	17,015,496	15·7
1952	120,628,827	1,038,156	121,666,983	19,060,261	15·7

29.—Distribution of Advertising Billings, by Media, 1947-52

Year	Total Commissionable Billings	Distribution of Billings					
		Publications	Other Visual	Mechanical	Radio	Other	Total
	$	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1947	64,422,777	61·8	4·4	16·3	15·8	1·7	100·0
1948	73,543,766	60·4	4·5	16·1	16·7	2·3	100·0
1949	86,450,968	61·2	4·4	16·4	15·7	2·3	100·0
1950	95,566,600	59·6	5·7	18·5	16·1	0·1	100·0
1951	107,461,752	59·3	5·2	18·0	17·3	0·2	100·0
1952	120,628,827	59·9	4·5	17·1	17·6	0·9	100·0

Section 2.—Grain Trade

Subsection 1.—Marketing Problems and Policies, 1953-54

Production of three of Canada's major grain crops—wheat, barley and rye—in 1953 was the second highest on record and yields of most other grains were also considerably above average. The cumulative effect of the 1953 crop, following the unusually large production of 1951 and the record production of 1952, continued to impose a severe strain on all grain storage and handling facilities and to call for an unusually high degree of co-ordination in marketing Canadian grain throughout this period. As in recent years, marketing arrangements for wheat, oats and barley in Western Canada in 1953-54 continued under the system of compulsory crop-year pools administered by the Canadian Wheat Board. Rye and flaxseed in Western Canada and all grains in Eastern Canada continued to be sold on the open market.

Unprecedented quantities of Western Canadian grain have necessitated a continuous review by the Canadian Wheat Board of marketing methods considered most suitable to provide adequate supplies of the various grains to meet both domestic and export commitments and, at the same time, to ensure that producers have the opportunity of delivering grain in as equitable a manner as possible. In 1953-54, initial delivery quotas of three bushels per 'specified acre' were established for individual producers on the basis of their 'specified acreage', that is, acreage seeded to wheat (other than Durums), oats, barley, and rye plus summerfallow. The initial quota was adjusted as conditions permitted, all delivery points being on a 7-bushel quota by July 9, 1954. Durum wheat and flaxseed remained on an open quota basis throughout the crop year.

Although marketings and exports of Canadian grain during the 1953-54 crop year did not continue the record-breaking levels of the preceding two crop years, they were well above average in total volume. Preliminary data on marketings of the five major grains in Western Canada in 1953-54 indicate a total of 610,100,000 bu., compared with 844,100,000 bu. in 1952-53 and the ten-year (1943-44—1952-53) average of 557,900,000 bu. Combined exports of the same grains (including wheat flour, rye flour, rolled oats and oatmeal in grain equivalent) amounted to 437,900,000 bu. as against 582,800,000 bu. in 1952-53 and the ten-year average of 381,800,000 bu.

Despite abnormally heavy marketings by farmers for three successive crop years, farm stocks of wheat, barley and rye at July 31, 1954, were the highest on record for the end of a crop year and those of oats and flaxseed had been exceeded only once before.

Combined stocks of the five major grains in all positions were estimated at a record 890,000,000 bu., more than two and one-half times as great as the 1944-53 average of 325,000,000 bu. These record total stocks of high-quality grain did much to offset the otherwise serious effects of the 1954 crop which was unusually low in both yield and quality.

Wheat.—*Supply and Disposition.*—Stocks on hand at the beginning of the 1953-54 crop year amounted to 369,200,000 bu. These stocks, the largest since 1943, represented the fifth consecutive annual increase from the abnormally low level of 77,700,000 bu. on hand at July 31, 1948. The next-to-record 1953 wheat crop of 614,000,000 bu., together with large carryover stocks, provided total crop-year supplies of 983,600,000 bu., the highest level on record.

30.—Production, Imports, Exports and Domestic Use of Wheat, Crop Years Ended July 31, 1948-54

(Millions of bushels)

Item	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54
Carryover Aug. 1	86·1	77·7	102·4	112·2	189·2	217·2	369·2
Production	341·8	386·3	371·4	461·7	552·7	687·9	614·0
Imports[1]	0·8	0·3	[2]	[2]	[2]	[2]	0·5
Totals, Supply	**428·7**	**464·3**	**473·8**	**573·9**	**741·9**	**905·1**	**983·6**
Exports[1]	195·0	232·3	225·1	241·0	355·8	385·5	255·1
Domestic use	156·0	129·6	136·5	143·7	168·9	150·4	145·8
Totals, Disposition	**351·0**	**361·9**	**361·6**	**384·7**	**524·7**	**535·9**	**400·9**
Carryover July 31	77·7	102·4	112·2	189·2	217·2	369·2	582·7

[1] Includes wheat flour in terms of wheat. [2] Less than 50,000 bu.

Exports of wheat and flour in terms of wheat during 1953-54 amounted to 255,100,000 bu.—130,400,000 bu. lower than the 385,500,000 in 1952-53 and 35,300,000 bu. below the ten-year (1943-44—1952-53) average of 290,400,000. The 1952-53 total of 385,500,000 bu. constituted the second highest crop exports on record. The 1953-54 figure otherwise is comparable to previous crop years in volume of exports. Exports in 1953-54, however, were well above the pre-war (1935-36—1939-40) average of 183,000,000 bu. and included the equivalent of 46,300,000 bu. of wheat in the form of wheat flour. Domestic utilization of wheat declined in 1953-54 to 145,800,000 bu. as against 150,400,000 in 1952-53 and the ten-year average of 156,000,000 bu. This decline is attributed to reductions in each of the main categories of use—animal feed, seed and human consumption; the level of domestic utilization however, was well above the pre-war (1935-36—1939-40) average of 114,000,000 bu. Reflecting these reductions in exports and domestic utilization, carryover stocks at July 31, 1954, reached a next-to-record level of 594,200,000 bu.

Price and Marketing Arrangements.—Marketing of Western Canadian wheat during the 1953-54 crop year was again conducted by the Canadian Wheat Board on a one-year pool basis with the initial payment set at $1.40 per bushel, basis No. 1 Northern in store Fort William–Port Arthur or Vancouver. The initial payment for No. 1 C.W. Amber Durum was established at $1.50 per bushel as an incentive for farmers to expand production of this type for which a strong demand exists. No adjustment payments on 1953-54 deliveries were made during the 1953-54 crop year but on Nov. 6, 1954, an interim payment of 10 cents per bushel (amounting in total to some $38,000,000) was announced to cover 1953-54 deliveries of wheat, with the exception of certain special varieties which had not yet been sold in sufficient quantity to justify an interim payment. Final payments to producers for wheat delivered to the 1953-54 pool will depend on the average prices at which the Board has been able to sell the various grades, as well as on the costs incurred by the Board in carrying abnormally heavy stocks over an extended period of time.

Early in the 1953-54 crop year an interim payment of 12 cents per bushel for all grades was made on the 1952-53 pool and on Feb. 25, 1954, a final payment averaging 10·934 cents per bushel was announced on the 1952-53 pool deliveries. Prior to the deduction of the Prairie Farm Assistance levy, the net price realized by producers in the 1952-53 pool for No. 1 Northern wheat, basis in store Fort William–Port Arthur or Vancouver, was $1·81871 per bushel. The corresponding realized price for the 1951-52 pool was $1·83569 per bushel.

The 1953-54 crop year coincided with the first year of the new three-year International Wheat Agreement. Under its provisions, Canada had a guaranteed export quota of 150,800,000 bushels for 1953-54 and, according to the final report on the year's transactions, Canadian sales under the Agreement totalled 90,900,000 bushels. The new Agreement operates under a price range of $2.05 per bushel maximum and $1.20 per bushel minimum in United States funds. Distribution of sales under the Agreement were quite widespread, with all but 14 of the 43 importing countries included in the pact purchasing either wheat or flour or both from Canada. The larger purchasers from Canada under the Agreement were the Federal Republic of Germany, 17,000,000 bushels; Belgium, 13,000,000; and Japan, 12,000,000. The major part of Canada's wheat trade during 1953-54, however, was carried on in Class II wheat (that is, wheat exported outside the provisions of the International Wheat Agreement). The principal customer for Class II wheat was the United Kingdom which received exports of about 65,800,000 bu. of Canadian wheat and flour in terms of wheat. The combined Canadian exports of 255,100,000 bu. of wheat and wheat flour went to 83 countries, territories and colonies during the crop year.

During 1953-54, domestic sales of wheat, with the exception of Durum, were made at the same prices as those prevailing for wheat sold under the International Wheat Agreement. Between Aug. 1 and Sept. 24, 1953, Durums for the domestic market and for I.W.A. were sold at the same price, but on and after September 25 an additional ten cents per bushel was charged for domestic sales of Durum. During the first few weeks of the 1953-54 crop year, Class II prices, excepting Durums, were fractionally above the I.W.A. and domestic sales levels. For the remainder of the crop year, Class II prices for all grades except Durums coincided with I.W.A. and domestic quotations. Throughout the season, Class II Durums sold at a substantial margin over Durums sold under I.W.A. or for domestic use. No. 1 Northern, basis Fort William–Port Arthur for I.W.A. and domestic sales averaged $2.01¼ during the month of August 1953, but declined to an average of $1.70¾ per bushel by July 1954, the last month of the crop year.

Other Grains.—*Supply and Disposition.*—Preliminary data on supply and disposition of the major Canadian grains for the crop year 1953-54 together with revised and more detailed data for 1952-53 are set out in Table **31**. Except for rye, production of each of the five major grains was somewhat below the record or near-record levels of 1952. Unusually large carryover stocks at July 31, 1953, however, more than offset the decline in production for wheat and barley. As a result, new records were established for crop-year supplies of wheat and barley which reached 983,600,000 bushels and 373,700,000 bushels, respectively.

Total exports of coarse grains continued in heavy volume during 1953-54. Exports of barley (including malt in barley equivalent) amounted to 93,700,000 bushels, exceeded only by the record 122,100,000 bushels in 1952-53. Exports of oats (including rolled oats and oatmeal) totalled 70,700,000 bushels, surpassed only by the record 85,800,000 bushels exported in 1944-45 and the 74,700,000 bushels shipped in 1943-44. Rye exports, at 16,800,000 bushels, set a new record and exports of flaxseed, at 5,200,000 bushels, were the largest since 1943-44. Despite substantial exports and the continuing high level of domestic use of all grains, new records were set at July 31, 1954, for year-end carryover stocks for both barley and rye, and oats stocks were the third highest on record.

31.—Distribution of Canadian Grain Crops, Crop Years Ended July 31, 1953 and 1954

(Millions of bushels)

Item	Wheat	Oats	Barley	Rye	Flaxseed
Crop Year 1952-53					
Carryover, Aug. 1, 1952	217·2	108·4	79·5	8·1	2·6
Production in 1952	687·9	466·8	291·4	24·8	12·3
Imports[1]	[2]	[2]	[2]	[2]	[2]
Totals, Supply	**905·1**	**575·2**	**370·9**	**32·9**	**14·9**
Exports[1]	385·5	65·4	122·1	9·0	4·1
Domestic Use—					
Human food	52·3	4·8	0·3	0·2	[2]
Seed requirements	35·9	24·3	15·1	1·7	0·6
Industrial use	0·2	—	13·2	0·6	4·5
Loss in handling	0·4	0·1	0·4	0·1	[2]
Animal feed and waste	61·6	336·2	108·2	5·2	1·7
Totals, Disposition	**535·9**	**365·4**	**137·2**	**7·8**	**6·7**
Crop Year 1953-54					
Carryover, July 31, 1953	369·2	144·4	111·7	16·2	3·9
Production in 1953	614·0	407·0	262·1	28·8	9·9
Imports[1]	0·5	[2]	[2]	[2]	[2]
Totals, Supply	**983·6**	**551·4**	**373·7**	**45·0**	**13·9**
Exports[1]	255·1	70·7	93·7	16·8	5·2
Domestic use	145·8	354·9	134·1	8·9	6·1
Totals, Disposition	**400·9**	**425·6**	**227·8**	**25·7**	**11·3**
Carryover, July 31, 1954	582·7	125·8	145·9	19·3	2·6

[1] Import and export data for wheat, oats, barley and rye, respectively, include flour in terms of wheat, rolled oats in terms of oats, malt in terms of barley and rye flour in terms of rye.

[2] Less than 50,000 bu.

Price and Marketing Arrangements.—As in recent years, marketing of Western Canadian oats and barley was again carried on through compulsory crop-year pools administered by the Canadian Wheat Board. Initial payments for both grains were the same as in 1952-53, on the basis of 65 cents per bu. for No. 2 C.W. oats and 96 cents per bu. for No. 3 C.W. 6-Row barley, in store Fort William-Port Arthur. No interim payments were made on either grain during the crop year but final payments for both were announced in October 1954.

Final payments on the 101,193,954 bu. of barley delivered to the 1953-54 pool averaged 9·71747 cents per bu. after deduction of payment expenses and the 1 p.c. Prairie Farm Assistance Act levy. Total prices (basis in store Fort William-Port Arthur) realized by producers for representative grades, after deducting carrying charges in country and terminal elevators, Board administrative costs, etc., but before deducting the 1 p.c. P.F.A.A. levy, were $1·05985 per bu. for No. 3 C.W. 6-Row barley and $0·95009 per bu. for No. 1 Feed barley. Final payments on the 89,725,291 bu. of oats delivered to the 1952-53 pool averaged 6·2759 cents per bu. Total prices realized by producers for representative grades, on the same basis as for barley, were $0·70517 for No. 2 C.W. and $0·66175 for No. 1 Feed oats.

Preliminary data indicate that about 11,900,000 bu. of rye and 7,400,000 bu. of flaxseed were delivered by farmers in Western Canada in 1953-54, both these grains being sold on the open market. In Eastern Canada, where commercial grain production is on a much smaller scale, all grain continued to be sold on the open market.

Subsection 2.—Miscellaneous Grain Trade Statistics

Grain Handled at Eastern Elevators.—The sharp increases in the amount of grain handled at eastern elevators in the 1952-53 crop year reflect the record western grain production and unprecedented export movement of Canadian grain during that period. With the exception of rye, the volume of each kind of grain handled in 1952-53 showed increases over 1951-52 which in turn was a year of above-average grain movement. Total receipts of the five major grains in 1952-53 amounted to 665,051,141 bu., about 20 p.c. above those of 1951-52 and nearly double those in each of 1949-50 and 1950-51. Total shipments, at 658,525,326 bu., were 25 p.c. over those of 1951-52 and almost double those in each of the crop years 1949-50 and 1950-51.

32.—Canadian Grain Handled at Eastern Elevators, Crop Years Ended July 31, 1949-53

Note.—Figures for the crop years ended 1922-29 are given in the 1931 Year Book, p. 626; for 1930-36 in the 1943-44 edition, p. 512; for 1937-42 in the 1947 edition, p. 816; and for 1943-48 in the 1951 edition, p. 830.

Item and Crop Year	Wheat	Oats	Barley	Rye	Flaxseed	Total Grain
	bu.	bu.	bu.	bu.	bu.	bu.
Receipts—						
1948-49	255,213,214	30,407,034	34,320,228	8,750,556	14,906,168	343,597,200
1949-50	262,914,675	34,911,609	17,239,457	747,858	8,711,243	324,524,842
1950-51	208,590,769	30,631,192	35,781,508	5,763,488	7,522,620	288,289,577
1951-52	380,847,530	43,117,243	113,942,213	7,803,517	6,913,172	552,623,675
1952-53	438,086,442	49,827,694	157,847,406	8,078,375	11,211,224	665,051,141
Shipments—						
1948-49	241,121,950	30,096,475	35,803,699	6,999,851	11,355,838	325,377,813
1949-50	251,853,362	33,140,216	18,139,086	1,553,094	11,743,926	316,429,684
1950-51	223,500,208	28,746,032	31,225,701	6,216,681	8,580,204	298,268,826
1951-52	358,201,436	42,983,657	109,327,850	7,644,936	6,642,468	524,800,347
1952-53	427,422,896	49,870,352	162,834,639	7,255,950	11,141,489	658,525,326

Grain Inspections.—With the exception of oats and soybeans, the volume of grain inspected by the Board of Grain Commissioners for Canada in the crop year ended July 31, 1953, was well above that of the preceding crop year. Inspections of wheat, at 479,844,901 bu., and barley, at 145,084,914 bu., were up by 11 p.c. and 33 p.c., respectively, but inspections of oats, at 105,623,582 bu., were down by 9 p.c. from those of 1951-52. In total, these three grains accounted for 95 p.c. of the Canadian grain inspected in 1952-53.

33.—Quantities of Grain Inspected, Crop Years Ended July 31, 1952 and 1953

Grain	1951-52			1952-53		
	Western Division	Eastern Division	Total	Western Division	Eastern Division	Total
	bu.	bu.	bu.	bu.	bu.	bu.
Wheat	421,497,737	8,999,819	430,497,556	470,367,968	9,476,933	479,844,901
Spring wheat	*420,866,620*	—	*420,866,620*	*469,897,210*	*44,809*	*469,942,019*
Winter wheat	*631,117*	*8,999,819*	*9,630,936*	*470,758*	*9,432,124*	*9,902,882*
Oats	115,602,391	688,461	116,290,852	105,500,800	122,782	105,623,582
Barley	108,830,109	212,018	109,042,127	144,560,107	524,807	145,084,914
Rye	9,216,775	156,510	9,373,285	14,433,627	341,002	14,774,629
Flaxseed	5,539,684	106,700	5,646,384	7,261,633	122,508	7,384,141
Buckwheat	48,316	112,397	160,713	186,850	164,575	351,425
Corn	51,262	6,945,175	6,996,437	175,955	11,676,016	11,851,971
Mixed grain	799,130	6,527	805,657	2,217,300	15,480	2,232,780
Soybeans	—	2,922,478	2,922,478	—	2,311,191	2,311,191
Beans	—	409,083	409,083	—	686,707	686,707

Lake Shipments of Grain.—The 1953 navigation season opened with the arrival of the first vessel at the Lakehead in mid-afternoon, Mar. 27, almost equalling the record early opening at 4 a.m. Mar. 27, 1945, and closed on Dec. 14, four days earlier than in 1952. During the season, total vessel shipments of wheat, oats, barley, rye, flaxseed and buckwheat from Fort William-Port Arthur amounted to 441,983,089 bu., down slightly from the 1952 total of 450,807,914 bu. Shipments of barley and oats, at 110,471,694 bu. and 98,202,498 bu., respectively, set new records for the second consecutive year for these grains.

34.—Lake Shipments of Canadian Grain from Fort William-Port Arthur, Ont. Season of Navigation, 1952 and 1953

Grain	1952			1953		
	To Canadian Ports	To U.S. Ports	Total Shipments[1]	To Canadian Ports	To U.S. Ports	Total Shipments[2]
Wheat............ bu.	209,619,852	36,301,684	246,093,244	200,287,969	8,318,478	209,117,510
Oats............. "	38,512,936	54,191,086	92,704,022	40,860,935	57,341,563	98,202,498
Barley........... "	80,370,705	16,492,644	96,863,349	78,012,515	31,763,840	110,471,694
Rye.............. "	3,428,631	5,599,384	9,089,225	3,188,236	14,489,023	17,677,259
Flaxseed.......... "	6,004,797	—	6,058,074	6,283,288	—	6,283,288
Buckwheat....... "	—	—	—	230,840	—	230,840
Totals......... bu.	**337,936,921**	**112,584,798**	**450,807,914**	**328,863,783**	**111,912,904**	**441,983,089**
Mixed grain....... lb.	—	—	—	21,714,790	—	21,714,790
Sample grain..... "	12,391,370	—	12,391,370	9,762,178	7,090,098	16,852,276
Screenings........tons	13,425	87,033	100,458	35,843	86,698	122,541

[1] Includes following shipments direct to Europe: wheat, 171,708; rye, 61,210; and flaxseed, 53,277 bu.
[2] Includes following shipments direct to Europe: wheat, 251,539 and barley, 695,339 bu.; and 259,524 bu. of wheat lost in shipwreck.

Wheat Flour.—After reaching a peak of 28,588,000 bbl. in 1946-47, Canadian wheat flour production dropped to a post-war low of 20,259,000 bbl. in 1949-50. Production in each of the following three crop years was only slightly below the five-year (1945-46—1949-50) average of 23,985,000 bbl. A rather sharp drop in 1953-54, however, reduced output of flour to 20,801,000 bbl., 13 p.c. below the 1952-53 total. The proportion of milling capacity utilized for the crop year 1953-54 averaged 70·1 p.c. compared with 81·4 p.c. in 1952-53.

Exports of wheat flour during recent years have followed approximately the same pattern as production, dropping from the 1946-47 peak of 16,896,000 bbl. to 10,151,000 bbl. in 1949-50. Exports in 1953-54 amounted to 10,277,000 bbl., representing approximately one-half the total production, a ratio which has been maintained fairly consistently in recent years.

35.—Wheat Milled for Flour, and Production and Exports of Wheat Flour, Crop Years Ended July 31, 1936-54

(Barrel=196 lb.)

Crop Year (Aug. 1-July 31)	Wheat Milled for Flour	Wheat Flour	
		Production	Exports
	'000 bu.	'000 bbl.	'000 bbl.
Av. 1935-36 — 1939-40	67,845	15,003	4,900
Av. 1940-41 — 1944-45	99,705	22,402	12,092
Av. 1945-46 — 1949-50	107,330	23,985	13,173
1950-51	106,748	23,630	12,427
1951-52	104,494	22,842	11,356
1952-53	106,727	23,866	12,556
1953-54	91,855	20,801	10,277

Section 3.—Live Stock Marketings*

Marketings of all classes of live stock, except hogs, were greater in 1953 than in 1952. Recorded marketings of cattle through public stockyards, packing plants and direct export were almost 24 p.c. higher in 1953; the number of graded steers increased 23 p.c., fed calves 47 p.c. and cows and heifers 14 and 13 p.c., respectively. Calf marketings, other than the older fed calves included with cattle, totalled 837,722 head as compared with 637,863 in 1952 and the marketings of sheep and lambs, at 570,289 head, exceeded the previous year's total by about 20,000. Disposition of sheep and lambs was higher than in 1953 in all provinces except Alberta which had shown a sharp increase in 1952. Although 1953 hog marketings at 5,000,000 head were lower by 1,700,000 than 1952 marketings, the 1953 figure represented the third highest annual output since the peak movement of almost 8,900,000 head in 1944. Hog gradings in 1953 indicated further lowering of quality; the proportion in Grade A dropped to 27·3 p.c. as compared with 28·5 p.c. in 1952 and 31·3 p.c. in 1951. On Mar. 31, 1953, the United States removed the restrictions on the importation of live stock and meats which had been in effect since Feb. 25, 1952. Price differentials, however, were so narrow between Canadian and United States markets that a relatively small export movement took place.

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* For more detailed information, *see* DBS annual, *Live Stock and Animal Products Statistics*, and the Department of Agriculture publication, *Annual Market Review*. Statistics of live stock and poultry are given at pp. 413-415 and 422-423, respectively, of this volume.

36.—Live Stock Marketed at Stockyards and Packing Plants, by Grade, 1949-53

(Exclusive of Newfoundland)

Live Stock	1949	1950	1951	1952	1953
	No.	No.	No.	No.	No.
Cattle—					
Steers up to 1,000 lb.—					
Choice	20,741	17,408	17,939	27,012	37,346
Good	74,388	60,215	52,887	66,723	86,060
Medium	129,457	86,186	72,181	86,047	110,907
Common	87,931	53,088	46,016	60,879	85,947
Steers over 1,000 lb.—					
Choice	64,104	43,036	57,754	106,978	114,746
Good	82,971	61,278	79,847	107,913	125,963
Medium	55,173	43,968	50,897	65,871	77,202
Common	14,842	11,426	14,233	18,269	27,705

36.—Live Stock Marketed at Stockyards and Packing Plants, by Grade, 1949-53—continued

Live Stock	1949	1950	1951	1952	1953
	No.	No.	No.	No.	No.
Heifers—					
Choice	18,430	12,695	13,102	14,757	14,253
Good	73,475	58,955	59,040	60,857	64,803
Medium	112,728	100,877	88,187	79,349	86,845
Common	102,650	87,648	66,563	54,723	70,153
Fed Calves—					
Choice	104,520	94,944	77,993	99,389	146,323
Good					
Medium					
Cows—					
Good	542,288	566,075	444,858	339,878	386,785
Medium					
Common					
Canners and cutters					
Bulls—					
Good	93,378	107,388	93,360	73,642	83,220
Common					
Stocker and Feeder Steers—					
Good	170,167	196,569	182,164	112,273	143,828
Common					
Stock Cows and Heifers—					
Good	43,777	55,172	49,120	27,164	34,341
Common					
Milkers and Springers	5,346	4,826	3,935	4,146	4,577
Totals, Cattle	**1,796,366**	**1,661,754**	**1,470,076**	**1,405,870**	**1,701,004**
Calves—					
Veal—					
Good and choice	243,363	239,649	189,607	173,117	232,820
Common and medium	498,897	490,743	370,812	357,857	446,111
Grass	80,087	83,766	54,604	50,448	72,973
Stockers	14,963	58,177	63,985	49,202	68,017
Totals, Calves	**837,310**	**872,335**	**679,008**	**630,624**	**819,921**
Hog Carcasses—					
"A"	1,376,911	1,536,531	1,530,808	1,909,691	1,363,720
"B"	2,356,202	2,516,136	2,537,964	3,464,597	2,673,573
"C"	198,412	202,143	226,954	435,004	392,410
"D"	15,625	19,558	18,644	29,803	23,180
Heavies	85,714	77,992	109,890	158,456	115,817
Extra heavies	81,084	66,142	90,531	133,552	92,469
Lights	63,542	85,364	79,691	163,014	87,550
Sows	206,713	225,001	253,307	345,635	207,171
Injured, ridglings and stags	45,052	46,690	46,753	58,890	46,924
Totals, Hog Carcasses	**4,429,255**	**4,775,557**	**4,894,542**	**6,698,642**	**5,002,814**
Lambs and Sheep Graded Alive—					
Lambs—					
Good handyweights	400,742	289,571	253,050	300,398	306,397
Good heavies					
Common	76,032	63,901	56,893	75,423	95,629
Bucks	53,688	84,084	56,745	64,375	62,336
Feeders	9,681	9,745	13,381	11,696	10,496
Sheep—					
Good heavies	65,936	44,985	31,898	28,965	23,364
Good handyweights					
Common	29,971	27,661	24,528	25,021	21,797
Totals, Lambs and Sheep	**636,050**	**519,947**	**436,495**	**505,878**	**520,019**

36.—Live Stock Marketed at Stockyards and Packing Plants, by Grade, 1949-53—concluded

Live Stock	1949	1950	1951	1952	1953
	No.	No.	No.	No.	No.
Lamb and Sheep Carcasses—					
Lambs—					
"A"	9,197	9,843	10,133	9,553	13,502
"B"	5,844	6,540	5,324	6,033	6,268
"C"	2,949	3,917	3,148	4,671	3,971
"D"	710	1,088	1,041	2,156	1,457
"E"	167	210	234	617	249
Sheep	1,952	2,157	1,946	2,531	2,994
Totals, Lamb and Sheep Carcasses	**20,819**	**23,755**	**21,826**	**25,561**	**28,441**

37.—Live Stock Marketed at Public Stockyards, Packing Plants and Direct for Export, by Province, 1953

(Exclusive of Newfoundland)

Year and Live Stock	Maritime Provinces	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
	No.	No.	No.	No.	No.	No.	No.	No.
Cattle—								
Totals to stockyards	888	42,424	360,998	109,175	277,461	346,471	14,515	1,151,932
Direct to packers	25,078	40,092	194,609	65,313	82,046	115,268	26,666	549,072
Direct for export	1,269	4,436	39,387	29	305	1,685	672	47,783
Country points in other provinces[1]	26	—	—	289	10,083	8,210	204	18,812
Totals, Cattle	**27,261**	**86,952**	**594,994**	**174,806**	**369,895**	**471,634**	**42,057**	**1,767,599**
Calves—								
Totals to stockyards	9,934	95,714	121,263	36,280	65,661	60,385	2,646	391,883
Direct to packers	17,426	171,063	124,261	45,288	18,579	46,722	4,699	428,038
Direct for export	819	363	2,485	29	4	—	98	3,798
Country points in other provinces[1]	—	—	—	157	7,183	6,569	94	14,003
Totals, Calves	**28,179**	**267,140**	**248,009**	**81,754**	**91,427**	**113,676**	**7,537**	**837,722**
Hogs—								
Totals to stockyards	1,065	103,133	194,125	55,868	101,437	247,857	1,072	704,557
Direct to packers	135,688	706,933	1,649,082	265,236	318,451	1,184,581	38,286	4,298,257
Direct for export	396	495	1,446	156	109	12,590	75	15,267
Totals, Hogs	**137,149**	**810,561**	**1,844,653**	**321,260**	**419,997**	**1,445,028**	**39,433**	**5,018,081**
Sheep and Lambs—								
Totals to stockyards	2,434	37,184	60,308	9,371	20,478	33,101	3,040	165,916
Direct to packers	38,424	106,924	106,457	23,426	11,865	73,257	22,191	382,544
Direct for export	122	10	1,150	5	3	822	42	2,154
Country points in other provinces[1]	—	—	—	—	14,332	5,343	—	19,675
Totals, Sheep and Lambs	**40,980**	**144,118**	**167,915**	**32,802**	**46,678**	**112,523**	**25,273**	**570,289**
Total Inward Movement—[2]								
Cattle	91	2,008	113,388	8,918	18,877	75,700	2,077	221,059
Calves	100	391	41,990	2,019	5,057	23,933	405	73,895
Sheep and lambs	—	315	17,902	1,175	2,014	14,296	317	36,019

[1] Live stock billed through stockyards to country points outside province of origin. [2] Movement from stockyards within each province to farms in the same province.

Section 4.—Warehousing and Cold Storage*

Warehousing ranks high among the means by which the utilities of 'place', 'time' and 'possession' are added to the products of industry. Its importance has been emphasized in modern times because of the introduction of cold-storage methods to the conservation of perishable foods.

The presentation of warehousing statistics is difficult because it is not an easy matter to define clearly what are to be regarded as stocks in storage. In these days of complicated business relationships and especially since the rise of the department store and chain store as characteristic institutions in the retail merchandising field, it often happens that warehousing is carried on in close relationship with merchandising. However, if the strict economic definition of warehousing is adopted then this term should be restricted to those facilities that add the utility of 'time' to the 'form' utilities that are the product of the extraction and manufacturing industries. Because the warehouses established in close connection with retail trade are more often than not convenient places for the temporary storage of goods in process of transfer from the manufacturer or wholesaler to the consumer, then they are not, in the strict economic sense, services that add the utility of 'time' to commodities already worked up into 'form'. At least, as some clear line must be drawn and because separate statistics of the latter branch of storage are not available, it is considered practicable to interpret warehousing in this way.

The statistics of warehousing are shown together under one general heading in this Section. Subsection 1 presents statistics of the licensed storage of grain. Subsection 2 deals with cold-storage facilities without which perishable foods such as meats, dairy products, fish and fruits could not be exchanged or distributed on a wide scale; it includes also figures of stocks of food on hand. Subsection 3 deals with the storage of petroleum and its products and Subsection 4 with public warehouses and customs warehouses. The facilities that specialize in the storage of tobacco and alcoholic liquors are analysed in Subsection 5. These bonded warehouses, as they are called, are under the strict surveillance of Federal Government excise officers who supervise all movements into and from such places of storage.

Subsection 1.—Licensed Grain Storage

Total grain storage in Canada licensed under the provisions of the Canada Grain Act by the Board of Grain Commissioners for Canada at Dec. 1, 1953, amounted to 561,505,000 bu., an increase of 22,215,000 bu. over the level of Dec. 1, 1952. Slightly over 16,000,000 bu. of this increase occurred in country elevators, reflecting the need for providing additional storage resulting from the cumulative effect of three large Western Canada grain crops. Licensed grain storage capacity in Canada reached a peak of 603,000,000 bu. at Dec. 1, 1943, but, following the disposal of heavy wartime stocks, declined to 428,000,000 bu. at Dec. 1, 1947. Since that date licensed grain storage capacity has increased each year.

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[*] The material in this Section was supplied by various Divisions of the Departments of Agriculture, Fisheries, Mines and Technical Surveys, National Revenue and of the Dominion Bureau of Statistics.

The harvesting and marketing of crops of record or near-record proportions in Western Canada in 1951, 1952 and 1953 have imposed an unusually heavy strain on all grain storage and handling facilities. The problem was further complicated at the beginning of this three-year period by the large proportion of out-of-condition grain harvested in the autumn of 1951, requiring special binning and thereby reducing effective storage capacity, and the abnormally large amount of grain harvested in the spring of 1952. As a result, a much higher proportion than usual of elevator space was occupied at the beginning of the 1952-53 crop year. Despite extremely heavy domestic and export movement of grains in both 1952-53 and 1953-54, an unusually high proportion of elevator space, as indicated in Table **38**, remained occupied throughout this period. Although information is given in the following table for only three dates in the crop year, weekly data on stocks of grain in various commercial positions may be obtained from the DBS *Grain Statistics Weekly*.

38.—Licensed Grain Storage Capacity and Grain in Store, 1952-53 and 1953-54

NOTE.—Because these figures are exclusive of stocks in transit or in eastern mills, they are lower than those shown in Table **15**, p. 412.

Crop Year and Storage Position	Licensed Storage Capacity	Canadian Grain in Licensed Storage			Proportion of Licensed Storage Capacity Occupied		
	Dec. 1, 1952	Nov. 27, 1952	Apr. 1, 1953	July 31, 1953	Nov. 27, 1952	Apr. 1, 1953	July 31, 1953
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	p.c.	p.c.	p.c.
1952-53							
Western country	306,834	204,673	218,203	245,335	66·7	71·1	80·0
Interior, private and mill	20,721	8,480	9,192	9,046	40·9	44·4	43·7
Interior, terminals	20,600	9,403	16,894	16,456	45·6	82·0	79·9
Pacific coast	21,756	10,047	7,609	7,881	46·2	35·0	36·2
Fort William-Port Arthur	84,449	43,998	66,884	50,829	52·1	79·2	60·2
Georgian Bay and Upper Lake ports	35,641	16,102	13,302	24,010	45·2	37·3	67·4
Lower Lake and Upper St. Lawrence ports	19,100	6,843	6,111	12,207	35·8	32·0	63·9
Lower St. Lawrence ports	24,912	11,152	11,800	17,588	44·8	47·4	70·6
Maritime ports[1]	5,277	1,526	3,169	4,179	28·9	60·1	79·2
Totals, 1952-53	**539,290**	**312,224**	**353,166**	**387,530**	**57·9**	**65·5**	**71·9**
	Dec. 1, 1953	Dec. 2, 1953	Mar. 31, 1954	July 31, 1954	Dec. 2, 1953	Mar. 31, 1954	July 31, 1954
	'000 bu.	'000 bu.	'000 bu.	'000 bu.	p.c.	p.c.	p.c.
1953-54							
Western country	322,986	238,827	254,977	267,133	73·9	78·9	82·7
Interior, private and mill	20,716	8,577	9,640	8,626	41·4	46·5	41·6
Interior, terminals	20,600	16,805	18,162	15,996	81·6	88·2	77·7
Pacific coast	21,756	13,915	13,787	8,054	64·0	63·4	37·0
Fort William-Port Arthur	90,517	39,104	81,744	62,976	43·2	90·3	69·6
Georgian Bay and Upper Lake ports	35,641	32,549	25,224	31,283	91·3	70·8	87·8
Lower Lake and Upper St. Lawrence ports	19,100	16,036	11,414	13,352	84·0	59·8	69·9
Lower St. Lawrence ports	24,912	19,718	16,750	21,396	79·2	67·2	85·9
Maritime ports[1]	5,277	4,890	3,368	5,564	92·7	63·8	105·4
Totals, 1953-54	**561,505**	**390,420**	**435,066**	**434,380**	**69·5**	**77·5**	**77·4**

[1] Excludes Newfoundland.

Subsection 2.—Cold Storage and Storage of Foods

Cold-Storage Warehouses.—Under the Cold Storage Act (R.S.C. 1952, c. 52), as amended (R.S.C. 1952, c. 313), subsidies are granted by the Federal Government to encourage the construction and equipment of cold-storage warehouses open to the public. The Act is administered by the Department of Agriculture.

There are five classifications of cold-storage warehouses in Canada: (1) public warehouses which store foods and food products and of which the entire space is open to the public; (2) semi-public, or those which store foods and food products and which, though retaining part of the space for the products of the owner, allot the remainder to the public; (3) private or those which store foods and food products and allot no space to the public, a classification that includes refrigerated space in connection with abattoirs, creameries, dairies, cheese factories and wholesale and retail distributing warehouses; (4) locker plant, where the total space is occupied by lockers for rental to the public and which may, in addition, cut, process, chill and freeze foods and food products for storage in lockers; and (5) bait depots, having space used solely or principally for freezing and storing bait for the use of fishermen.

No hard and fast rule can be laid down for distinguishing between public and private warehouses. In general, those owned and operated by firms trading in the goods stored in the warehouse are considered as private, though most of these places rent space to the public when it is not required for their own purposes.

Though the figures in Tables **39** and **40**, compiled by the Department of Agriculture, give some idea of the cold-storage warehouse capacity in Canada, it must be explained that it is not possible to secure completely accurate information on this subject and that these figures are approximations only.

39.—Cold-Storage Warehouses, by Province, Year Ended Mar. 31, 1954

Province	Subsidized Public Warehouses[1]				All Warehouses[1]	
	No.	Refrigerated Space	Cost	Total Subsidy	No.	Refrigerated Space
		cu. ft.	$	$		cu. ft.
Newfoundland	—	—	—	—	52	1,606,968
Prince Edward Island	9	290,597	191,437	56,975	24	425,200
Nova Scotia	21	4,987,445	4,009,574	1,193,592	78	5,657,471
New Brunswick	8	1,545,429	1,029,760	308,928	47	2,089,402
Quebec	35	3,854,791	2,960,108	916,784	249	16,152,573
Ontario	60	9,251,533	6,191,691	1,854,017	883	30,497,085
Manitoba	9	3,141,532	2,180,934	654,986	165	9,575,447
Saskatchewan	20	630,164	737,099	221,130	247	4,300,273
Alberta	5	624,925	475,876	142,347	201	6,840,758
British Columbia	68	22,845,345	9,491,354	2,850,234	176	29,736,861
Totals	**235**	**47,171,761**	**27,267,833**	**8,198,993**	**2,122**	**106,882,038**

[1] Figures are subject to revision.

40.—Storage and Refrigerated Space,[1] by Province, as at June 30, 1954

Class of Storage	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Public—					
Warehouses..................... No.	..	14	27	12	54
Refrigerated Space—					
Freezer......................cu. ft.	..	195,087	1,239,634	994,850	4,173,038
Cooler........................ “	..	29,342	3,417,447	649,198	6,511,378
Locker........................ “	..	43,520	15,668	20,706	12,894
Private—					
Warehouses..................... No.	29	9	47	34	181
Refrigerated Space—					
Freezer......................cu. ft.	1,152,555	46,541	711,243	305,711	1,073,533
Cooler........................ “	106,008	109,475	229,119	98,798	4,196,488
Locker........................ “	..	..	4,600	469	..
Locker Plants—					
Warehouses..................... No.	2	..	2	..	14
Refrigerated Space—					
Freezer......................cu. ft.	..	..	8,700	..	66,022
Cooler........................ “	..	..	3,296	..	35,232
Locker........................ “	55,050	..	12,020	..	83,988
Bait Depots—					
Warehouses..................... No.	21	1	2	1	..
Refrigerated Space—					
Freezer......................cu. ft.	289,905	965	15,744	15,053	..
Cooler........................ “	750	270	..	4,617	..
Locker........................ “	2,700	..	..	..	..
Totals, Warehouses.......... No.	**52**	**24**	**78**	**47**	**249**
Totals, Refrigerated Space. .cu. ft.	**1,606,968**	**425,200**	**5,657,471**	**2,089,402**	**16,152,573**

Class of Storage	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Totals
Public—						
Warehouses......... No.	137	15	22	13	78	372
Refrigerated Space—						
Freezer...........cu. ft.	4,821,224	3,997,173	561,234	469,148	4,992,672	21,444,060
Cooler........... “	12,337,443	1,444,055	701,282	323,975	22,136,283	47,550,403
Locker........... “	601,632	37,150	96,162	86,759	29,621	944,112
Private—						
Warehouses......... No.	378	60	75	48	26	887
Refrigerated Space—						
Freezer...........cu. ft.	2,464,747	648,328	607,305	1,816,029	377,678	9,203,670
Cooler........... “	6,893,767	2,716,221	1,233,511	3,067,050	1,023,455	19,673,892
Locker........... “	63,774	..	20,734	11,985	..	101,562
Locker Plants—						
Warehouses......... No.	368	90	150	140	72	838
Refrigerated Space—						
Freezer...........cu. ft.	482,890	53,726	28,677	29,385	103,977	773,377
Cooler........... “	708,850	140,907	258,163	248,252	157,548	1,552,248
Locker........... “	2,082,758	537,887	793,205	788,175	915,627	5,268,710
Bait Depots—						
Warehouses......... No.	..	..	..	..	..	25
Refrigerated Space—						
Freezer...........cu. ft.	..	..	..	..	..	321,667
Cooler........... “	..	..	..	..	..	5,637
Locker........... “	..	..	..	..	..	2,700
Totals, Warehouses. No.	883	**165**	**247**	**201**	**176**	**2,122**
Totals, Refrigerated Space............ cu. ft.	**30,457,085**	**9,575,447**	**4,300,273**	**6,840,758**	**29,736,861**	**106,842,038**

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[1] Figures are subject to revision.

41.—Stocks of Food Commodities on Hand in Cold Storage and in Dairy Factories, as at Jan. 1, 1953

Item	As at Jan. 1	Minimum during Year	Date at which Minimum Occurred	Maximum during Year	Date at which Maximum Occurred	Twelve-Month Average
Butter, Creamery, Dairy and Whey—						
In storage....................'000 lb.	54,497	26,604	Apr. 1	94,442	Oct. 1	59,983
Total stock.................... "	54,497	26,849	Apr. 1	94,547	Oct. 1	60,088
Cheese, Cheddar—						
In storage.................... "	40,773	25,401	May 1	47,652	Oct. 1	36,634
Total stock.................... "	40,993	25,542	May 1	47,845	Oct. 1	36,851
Evaporated Whole Milk—						
Total stock.................... "	64,661	32,570	Apr. 1	81,787	Sept. 1	58,316
Skim-Milk Powder—						
Total stock.................... "	16,645	11,680	Dec. 1	16,858	Oct. 1	14,387
Eggs, Shell—						
In storage....................'000 cases	53	38	Dec. 1	322	June 1	158
Total stock.................... "	54	38	Dec. 1	323	June 1	160
Eggs, Frozen—						
In storage.................... '000 lb.	5,188	4,091	Mar. 1	7,925	Aug. 1	5,889
Poultry, Dressed—						
In storage.................... "	23,719	7,054	July 1	28,850	Dec. 1	14,422
Total stock.................... "	23,744	7,104	July 1	29,025	Dec. 1	14,470
Pork, Fresh—						
In storage.................... "	8,439	3,071	Aug. 1	8,439	Jan. 1	4,741
Pork, Frozen—						
In storage.................... "	48,817	5,421	Oct. 1	55,349	May 1	33,380
Pork, Cured and in Cure—						
In storage.................... "	11,557	9,859	Oct. 1	15,592	Mar. 1	12,799
Lard—						
In storage.................... "	12,352	2,309	Oct. 1	12,352	Jan. 1	7,369
Beef, Fresh—						
In storage.................... "	7,474	7,474	Jan. 1	13,030	Dec. 1	10,477
Beef, Frozen—						
In storage.................... "	25,105	20,989	Nov. 1	33,368	Apr. 1	26,755
Beef, Cured, etc.—						
In storage....................'000 lb.	382	374	Mar. 1	585	June 1	451
Veal—						
In storage.................... "	3,891	2,081	Apr. 1	6,765	Nov. 1	4,552
Mutton and Lamb—						
In storage.................... "	4,482	1,050	Aug. 1	4,482	Jan. 1	2,385
Fruit—						
Apples, Fresh—						
In storage..................'000 bu.	3,769	137	June 1	6,531	Nov. 1	2,662
Frozen Fruit—						
In storage.................. '000 lb.	16,558	7,428	June 1	23,055	Oct. 1	16,085
In Preservation—						
In storage.................... "	12,218	7,407	Aug. 1	12,577	Feb. 1	10,372
Potatoes—						
In storage....................'000 bu.	17,561	2,960	June 1	27,468	Nov. 1	14,339

Cold Storage of Fish.—The stocks of frozen fish held in Canada during 1953 followed the normal seasonal pattern. During the first four months, when activity in the industry was reduced because of weather conditions, stocks gradually declined. As summer operations began and production of frozen fish increased, stocks rose and continued to do so until the end of October. Production declined with the coming of winter and a greater proportion of the demand for frozen fish was supplied out of stocks.

Stock figures at the beginning of each month in 1952 and 1953 for the 10 provinces were as follows:—

Month	*1952*	*1953*
	'000,000 lb.	
Jan. 1	44·5	54·7
Feb. 1	35·5	45·8
Mar. 1	33·1	38·4
Apr. 1	27·4	34·3
May 1	29·7	32·7
June 1	35·0	37·3
July 1	46·0	46·7
Aug. 1	55·4	50·5
Sept. 1	60·1	58·6
Oct. 1	66·3	59·8
Nov. 1	66·6	60·9
Dec. 1	60·5	57·4
AVERAGES	46·7	48·1

The holdings of frozen fish reflect the level of production as well as the market at a given time. The demand for some frozen products was not as great in 1953 as in 1952 and, despite slightly reduced supplies of fish for freezing, average monthly holdings of frozen fish were higher than those of the previous year. Dressed Pacific halibut stocks in 1953 showed the greatest increase over 1952; production of this product was high but demand was somewhat lower. Holdings of Atlantic cod fillets were larger in the first four months of 1953 than in the same period of the previous year. Canadian fillets experienced more intensive competition in the United States market from other producers which in turn reduced demand for the Canadian product. Lower than normal output during the summer and autumn period and an improved market caused stocks to decrease below 1952 levels.

Average monthly holdings of the main fish products in 1952 and 1953 for the 10 provinces were as follows:—

Group and Product	*1952*	*1953*
	'000,000 lb.	
FROZEN, FRESH SEAFISH—		
Salmon, Pacific, dressed and filleted	8·4	7·1
Halibut, Pacific, dressed	7·5	9·3
Herring, Atlantic, round	5·5	5·7
Cod, Atlantic, filleted	4·4	4·0
TOTALS, FROZEN, FRESH SEAFISH[1]	38·9	40·9
FROZEN, FRESH INLAND FISH—		
Whitefish, dressed and filleted	1·4	1·1
Tullibee, round or dressed	0·8	0·7
Pickerel (yellow pike) dressed and filleted	0·6	0·7
TOTALS, FROZEN, FRESH INLAND FISH[1]	5·1	4·7
FROZEN, SMOKED FISH—		
Cod, Atlantic, filleted	1·5	1·0
Sea herring, dressed	0·7	0·8
Haddock, dressed	0·2	0·2
TOTALS, FROZEN, SMOKED FISH[1]	2·7	2·5
GRAND TOTALS	46·7	48·1

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[1] Totals include other items not listed.

Cold Storage of Dairy Products.—Cold-storage facilities are a necessary adjunct in the manufacture of dairy products, most of which are perishable in varying degrees. All creameries have facilities for the storing of butter, the size and type of storage depending on the size of the creamery. If the butter produced at small country plants is not printed for immediate sale, the butter solids are disposed of or are transported to larger creameries where better refrigeration is available or to private or public cold storages in the larger urban centres.

Temperature control is important in the curing process for cheese as well as in the prevention of deterioration. Most cheese factories are equipped with mechanical refrigeration and are required to have storage capacity for 17 days' produce during the period of maximum manufacture. The cheese is then transferred to central warehouses.

Milk is placed in storage as soon as it is bottled and held until delivery. Dry whole milk and other dried milk products containing fat are usually stored in cool air chambers to prevent rancidity.

Cold Storage of Other Foods.—Cold-storage space for apples in Canada has increased rapidly in recent years as a result of the promotion of orderly marketing, the extention of the marketing season generally, and increased production in some areas. The trend has followed the curtailment in shipments to traditional markets in the United Kingdom and other European countries after World War II. There has been an increase recently in the construction of both private and co-operatively owned storages, particularly in the Province of Quebec. Increase in cold-storage capacity is illustrated by the distribution of Dec. 1 storage stocks. During the five-year period 1943-47, only 53 p.c. of the holdings were in cold storage. In 1951, 1952 and 1953 the proportions had risen to 80 p.c., 84 p.c. and 94 p.c., respectively.

Potatoes are not ordinarily held in cold storage but there has been an increase in the construction of modern type potato storage houses and warehouses, particularly in the commercial producing areas.

Subsection 3.—Storage of Petroleum and Petroleum Products

Bulk storage plants for petroleum and petroleum products are established at convenient distributing centres, usually on a water-front so that full advantage can be taken of the lower cost of water-borne traffic. From these centres the goods are transferred by boat, rail or truck to smaller distributing depots or directly to retail outlets. The principal refining and distributing centres are located at or near Halifax, Quebec, Montreal, Ottawa, Toronto, Sarnia, Fort William, Regina, Calgary, Turner Valley, Edmonton and Vancouver.

42.—Inventories of Petroleum and Petroleum Products in Storage at Jan. 1, 1950-54

(Barrels of 35 Imperial gallons)

NOTE.—Figures for 1940-48 are given in the 1950 Year Book, p. 852, and for 1949 in the 1954 edition, p. 925.

Product	1950	1951	1952	1953	1954
	bbl.	bbl.	bbl.	bbl.	bbl.
Refinery Inventory—					
Crude oil	6,002,321	5,097,114	8,183,535	10,826,281	7,269,236
Naphtha specialties	114,638	157,366	154,238	120,768	140,906
Aviation gasoline	257,231	277,815	293,181	427,835	398,517
Motor gasoline	3,952,265	4,258,825	4,939,681	4,875,881	6,193,511
Tractor distillate	171,549	78,473	63,190	95,251	215,912
Aviation turbine fuel	[1]	[1]	21,409	51,103	148,548
Kerosene	291,315	120,305	166,497	154,010	139,613
Stove oil (No. 1 fuel oil)	964,165	836,879	1,081,484	1,064,116	1,690,720
Furnace oil	1,782,285	1,952,317	2,837,202	3,625,302	3,369,841
Other light fuel oil			285,151	320,950	282,377
Heavy fuel oil (Nos. 4, 5 and 6)	1,662,863	2,154,406	2,822,711	3,578,834	3,041,300
Diesel fuel	704,619	1,140,751	1,254,012	1,499,721	1,585,726
Asphalt	533,897	444,725	771,135	726,470	696,448
Coke (petroleum)	70,272	33,384	32,011	12,287	16,041
Lubricating oil	253,655	197,805	221,854	226,184	239,525
Grease, wax and candles	13,673	24,818	12,131	16,485	23,867
Other products	6,945	7,026	22,856	29,457	58,704
Marketing Inventory—					
Naphtha specialties	91,081	78,209	101,251	98,874	131,732
Aviation gasoline	439,888	653,727	689,791	648,956	685,913
Motor gasoline	4,830,869	5,377,351	5,998,086	5,299,862	6,177,856
Tractor distillate	99,462	40,376	33,275	20,675	19,156
Aviation turbine fuel	[1]	[1]	64,404	35,654	154,274
Kerosene	218,472	196,389	199,786	146,133	145,699
Stove oil (No. 1 fuel oil)	648,856	908,832	1,108,902	1,092,830	1,639,329
Furnace oil	1,811,680	3,363,424	3,647,111	3,858,910	4,215,581
Other light fuel oil			120,254	136,188	220,179
Heavy fuel oil (Nos. 4, 5 and 6)	937,094	1,139,667	1,422,627	2,199,511	2,264,321
Diesel fuel	882,387	813,369	1,060,171	1,234,550	1,631,697

[1] Not classified separately.

Subsection 4.—General Warehousing

Public Warehouses.—In 1944, the Dominion Bureau of Statistics began an annual census of the principal public warehouses in Canada. The latest figures available at the time of going to press are those for 1951, which are summarized in the 1954 Canada Year Book, pp. 925-926. Complete details are given in DBS report, *Warehousing, 1951.*

Customs Warehouses.—Warehouses for the storage of imported goods are known as customs warehouses. These are divided into nine classes, as follows: (1) those occupied by the Federal Government, some of which are used for examination and appraisal of imported goods and others, known as Queen's Warehouses, are used for the storage of unclaimed, abandoned, seized or forfeited goods; (2) warehouses, consisting of an entire building or part thereof, properly separated from the rest of the building by a partition, which are used exclusively for the storage of imported goods consigned to the proprietor of the building; (3) buildings or parts of buildings properly partitioned off, used for the storage of imported goods consigned to the proprietor or others, or for the storage of unclaimed or seized goods; (4) sufferance warehouses operated by the owners of vessels for the storage of in-bond goods transported by water or air, those operated by railway companies and those operated by express companies; (5) yards, sheds and buildings intended for the storage of imported coal and coke; (6) farms, yards, sheds, etc., which an importer of horses or sheep intends to use for the feeding and pasturing of imported animals other than pure-bred mares; (7) warehouses for the storage of animals, including horses for racing, and articles for exhibition or competition for prizes; (8) warehouses for clover seed imported for the purpose of being recleaned and prepared for a foreign market; and (9) yards, sheds, etc., which importers intend to use for the storage of goods too heavy or too bulky to be admitted to an established customs warehouse.

Subsection 5.—Bonded Warehousing and Storage of Wines

Bonded Warehousing.—The Excise Duty Branch of the Department of National Revenue considers any premises licensed under the Excise Act to be a warehouse, whether for storage of raw materials to produce finished tobacco or cigar products or for spirits or malt used for brewing. Practically the total production of spirits is placed in bonded warehouses and only a small part of the output of beer is retained in storage. Wine, unlike spirits and beer, is not secured under bond. All imports of alcoholic beverages must go through bonded warehouses before being released to Provincial Liquor Commissions or Boards, or other agencies authorized by the Commissions or Boards to take alcoholic beverages out of bond. Similarly, tobacco, cigars and cigarettes that are not stamped and duty paid are secured in bond. In addition to these warehouses, there are those in which no manufacturing or production is carried on but which are being used solely for the storage of goods upon which duty has not been paid. Goods are stored in these warehouses usually for the purpose of rapid distribution and for delivery as ships' stores.

Spirits, Tobacco and Malt in Bond.—Table **43** shows the quantities of distilled liquor, tobacco, cigars and cigarettes in bond in recent years. The yearly inventory of breweries showed an increase of total gallonage of beer in stock from 23,388,779 gal. in 1952 to 27,334,817 gal. in 1953.

43.—Distilled Liquor, Tobacco, Cigars and Cigarettes in Bond, Quarterly, 1950-54

Item and Quarter		1950	1951	1952	1953	1954
Distilled Liquor—						
March	'000 pf. gal.	76,687	81,878	87,973	92,089	95,400
June	"	78,855	84,120	90,007	93,339	97,845
September	"	79,127	84,647	90,241	92,501	98,081
December	"	79,655	85,921	90,658	93,174	99,477
Tobacco, Unmanufactured—						
March	'000 lb.	201,024	193,353	213,981	223,333	212,030
June	"	181,132	176,028	189,371	194,797	185,920
September	"	155,997	156,832	162,440	165,778	159,089
December	"	154,459	164,949	167,467	162,679	166,526
Tobacco, Manufactured—[1]						
March	'000 lb.	18	5	26	1	7
June	"	—	—	—	—	..
September	"	1	—	6	4	..
December	"	—	10	4	1	1
Cigars—						
March	'000	2,416	2,072	3,330	2,726	3,505
June	"	2,277	2,007	2,761	2,221	2,952
September	"	1,302	804	1,110	2,060	1,867
December	"	303	857	1,074	1,407	1,090
Cigarettes at 3 lb. or under—[1]						
March	'000	4,500	5,347	15,253	7,499	17,574
June	"	4,866	3,602	2,780	4,687	14,612
September	"	3,890	2,344	5,131	7,108	2,481
December	"	3,461	4,251	2,761	9,763	3,669

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[1] Excludes Newfoundland.

Beverage spirits, as shown in Table 44, refer to spirits released for consumption but not to industrial alcohol; malt beer does not include beer made from duty-free malt; malt used is the total malt used to produce the malt beer; tobacco includes all types of manufactured tobacco products and snuff.

44.—Beverage Spirits, Malt Beer, Malt, Tobacco and Tobacco Products taken out of Bond, Destined for Consumption, 1944-53

NOTE.—The figures published in the corresponding table of the 1952-53 and previous Year Books are on a different basis from those published in this table.

Year	Beverage Spirits	Malt Beer[1]	Malt Used	Cigars	Cigarettes	Tobacco
	pf. gal.	gal.	lb.	'000	'000	'000 lb.
1944	2,679,389	106,256,221	218,149,148	197,779	11,666,421	27,304
1945	3,639,460	115,539,227	240,105,314	207,017	14,264,673	29,502
1946	4,477,845	146,119,954	303,172,529	220,994	14,866,931	29,459
1947	4,483,786	162,140,243	332,282,690	215,902	15,143,369	28,553
1948	4,580,932	172,630,562	349,081,232	210,016	15,852,875	29,174
1949	4,715,417	172,963,887	348,786,984	208,208	16,839,654	28,710
1950	4,739,707	171,974,662	340,287,033	198,981	17,167,729	29,187
1951	5,074,217	179,648,482	353,130,285	169,136	15,667,266	30,177
1952	5,288,884	195,780,017	378,764,899	200,263	17,848,325	33,637
1953	5,618,040	202,897,996	381,508,232	235,587	21,001,492	28,732

[1] Duty has been paid herein on the malt.

Storage of Wines.—The wine industry is confined to a few localities such as the Niagara Peninsula in Ontario and the Okanagan Valley in British Columbia. Firms manufacturing native wines are not bonded, as far as the Federal Government is concerned, nor is wine in storage for maturing placed in bond. The only goods warehoused in bond in connection with wineries are sugar supplies and supplies of grape spirit distilled by the distilleries and held by the wineries for fortifying wines. Native wine produced and placed in storage for maturing and blending for the years 1948-52 was reported as follows:—

Year		*Ontario*	*Other Provinces*	*Total*
1948	gal.	4,377,487	661,134	5,038,621
	$	2,786,186	513,639	3,299,825
1949	gal.	3,390,787	608,665	3,999,452
	$	2,240,481	492,678	2,733,159
1950	gal.	5,383,514	501,330	5,884,844
	$	3,198,462	404,574	3,603,036
1951	gal.	4,182,767	494,288	4,677,055
	$	2,729,147	407,849	3,136,996
1952	gal.	4,383,358	552,694	4,936,052
	$	2,764,750	440,864	3,205,614

Section 5.—Co-operative Organizations*

Co-operative business in Canada as reported by marketing, purchasing and service organizations, and fishermen's co-operatives for the crop year ended July 31, 1953, amounted to $1,202,325,902. This figure is $90,000,000 greater than the volume reported in 1952. Co-operatives reporting for the year 1953 numbered 2,773, compared with 2,616 in 1952 and total membership was 1,429,003, compared with 1,297,614.

The volume of farm supplies marketed co-operatively was $876,300,000 and sales of farm supplies and merchandise through co-operatives were valued at $256,700,000.

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* Prepared under the direction of Dr. J. G. Taggart, C.B.E., Deputy Minister of Agriculture, by J. E. O'Meara, Economics Division, Marketing Service, Department of Agriculture.

Fishermen's co-operatives reported increases in sales values of fish marketed. In 1953, the volume was $17,200,000, compared with $13,900,000 in 1952. Sales of supplies to fishermen through co-operatives fell off slightly. Service co-operatives reported total revenue from services offered was $20,600,000. This is a substantial increase over the 1952 figure and is the result of more complete and accurate reporting.

Developments 1952-53.—Numerous valuable and interesting publications dealing with co-operatives were issued in 1953. One was *A Guide to Co-operative Housing*, prepared and published by St. Patrick's College, Ottawa, Ont. The United States Department of Agriculture made a study of the possibilities of trade between Canada and United States Co-operatives and published a bulletin entitled *Trade with Canadian Co-operatives.* One colour film was in production in 1953 for Manitoba Pool Elevators Limited.

Canada sent a team of agricultural and co-operative specialists to India, Pakistan and Ceylon in 1953, under the auspices of the Colombo Plan; late in the year, the Government of India sent a mission of four co-operative leaders to study co-operatives in Canada.

Marketing.—During 1953, over 1,100 farmers' marketing co-operatives were in operation and marketed agricultural products valued at $876,287,346, an increase of $36,000,000 over the total reported for 1952. The sales value of dairy products marketed by co-operatives in 1953 increased by $2,300,000 over the comparable figure for 1952.

Co-operatives engaged in marketing grain increased their volume by $80,000,000, to a total of $510,500,000, mainly owing to the record crop of western wheat. Livestock marketing co-operatives reported decreased sales in 1953 as hog slaughterings were down and prices of cattle fell sharply.

Cash income from the sale of farm products handled by co-operatives increased by about 4 p.c. in 1953 over 1952. The increase in the sales of farm products by co-operatives also increased by 4 p.c., which would seem to indicate that co-operatives are keeping pace with the increased volume.

Co-operatives handled 32·4 p.c. of all farm products marketed commercially in Canada and there has been little change in this proportion since 1947.

Merchandising.—Total sales of farm supplies, household and consumer goods by co-operatives in 1952-53, were valued at $256,730,885, greater than the 1951-52 total by $22,000,000. The greatest increase was reported by co-operatives handling food products (groceries). There was a substantial increase in the number of co-operatives reporting business in the grocery line and better analyses and more returns were received from Ontario and Quebec.

Financial Structure.—Total assets of co-operative marketing and purchasing associations in Canada, as at July 31, 1953, amounted to $419,000,000. The excess of assets over liabilities was $185,600,000 and was made up of direct liabilities to members in the form of loans and deferred patronage dividends amounting to $73,300,000 and net worth (share capital, reserves and unallocated surplus) of $112,300,000. Plant value was reported to be $117,000,000 and working capital totalled $68,400,000.

45.—Summary Statistics of Co-operative Marketing and Purchasing Associations, Crop Years Ended July 31, 1944-53

Year	Associations	Places of Business	Patrons	Sales of Farm Products	Sales of Supplies	Total Business[1]
	No.	No.	No.	$	$	$
1944	1,792	4,534	719,080	459,798,798	65,508,771	527,855,540
1945	1,824	4,441	738,345	500,481,627	81,360,855	585,650,066
1946	1,953	4,488	922,928	454,564,927	95,603,311	554,329,652
1947	2,095	5,084	1,036,498	578,638,214	127,001,488	712,583,246
1948	2,249	5,423	1,195,372	616,347,477	157,874,045	780,084,955
1949	2,378	5,667	1,209,520	783,293,225	191,804,630	982,232,002
1950	2,495	5,761	1,223,582	803,638,962	206,082,408	1,015,264,763
1951	2,348	5,830	1,195,034	769,264,824	209,985,815	988,459,832
1952	2,194	5,470	1,108,803	840,113,835	234,848,220	1,085,854,744
1953	2,221	4,987	1,081,493	876,287,346	256,730,885	1,160,280,706

Year	Value of Plant	Total Assets	Liabilities to the Public	Shareholders or Members	Members' Equity
	$	$	$	No.	$
1944	40,664,827	203,047,911	130,556,373	690,967	72,491,538
1945	43,048,326	171,128,184	87,354,033	739,804	83,774,151
1946	46,775,158	163,467,434	71,012,260	926,863	92,455,174
1947	53,027,212	168,195,387	71,403,750	982,990	96,791,637
1948	75,009,655	201,603,705	89,381,360	1,127,229	112,222,345
1949	89,832,908	236,962,924	106,599,688	1,144,698	130,363,236
1950	98,514,782	254,478,777	111,092,652	1,173,126	143,386,125
1951	99,790,191	306,834,165	159,357,602	1,184,235	147,476,563
1952	129,983,112	410,210,309	214,737,270	1,163,803	195,473,039
1953	117,228,290	419,930,634	234,339,211	1,195,985	185,591,423

[1] Includes other revenue.

46.—Farm Products Marketed, Merchandise and Supplies Handled by Co-operative Business Organizations in Canada, Crop Year Ended July 31, 1953

Item	Associations[1]	Value of Sales
	No.	$
Marketing—		
Dairy products	631	131,936,151
Fruit and vegetables	252	38,556,031
Grain and seed	114	510,547,037
Live stock	237	103,854,803
Eggs and poultry	269	23,749,319
Lumber and wood	23	1,805,483
Honey	9	1,412,741
Wool	17	3,380,463
Fur	13	533,429
Tobacco	5	54,945,695
Maple products	2	2,511,201
Miscellaneous	78	3,054,993
Totals, Marketing	**1,181**	**876,287,346**
Merchandising—		
Food products	928	74,307,185
Clothing and home furnishings	605	9,150,277
Petroleum products and auto accessories	763	29,980,554
Feed, fertilizer and spray material	949	88,630,587
Machinery and equipment	406	15,267,135
Coal, wood and building material	719	13,119,201
Miscellaneous	1,109	26,275,946
Totals, Merchandising	**1,703**	**256,730,885**
Grand Totals	**2,221**	**1,133,018,231**

[1] Duplication exists in this column as some associations market produce as well as handle supplies. Some associations market more than one product and some handle many of the supplies listed.

47.—Summary Statistics of Co-operative Marketing and Purchasing Associations, by Province, Crop Years Ended July 31, 1951-53

Province	Associations	Shareholders or Members	Sales of Products	Sales of Merchandise	Total Business[1]
	No.	No.	$	$	$
Newfoundland 1951	38	5,558	23,889	2,307,707	2,340,101
1952	49	5,051	9,342	3,010,462	3,027,237
1953	47	7,278	110,464	3,404,981	3,525,235
Prince Edward Island 1951	32	9,309	2,750,883	2,341,016	5,129,056
1952	25	6,036	3,038,243	3,316,385	6,459,366
1953	29	6,763	2,309,729	3,153,449	5,504,536
Nova Scotia 1951	114	22,185	6,548,561	12,117,451	18,791,301
1952	108	23,304	5,483,490	12,398,917	17,969,841
1953	95	20,957	5,308,763	13,586,039	19,190,823
New Brunswick 1951	60	13,354	5,796,290	4,805,791	10,648,559
1952	42	9,698	5,533,429	3,522,485	9,317,521
1953	45	10,672	4,895,514	6,336,545	11,327,203
Quebec 1951	716	89,922	70,317,707	54,813,566	125,910,918
1952	682	90,988	67,745,779	60,233,834	129,155,657
1953	708	102,664	70,172,704	72,551,838	144,002,218
Ontario 1951	342	94,934	116,252,978	42,117,311	159,348,314
1952	320	90,517	95,109,827	41,298,489	138,856,465
1953	343	102,374	103,325,205	41,038,859	146,537,314
Manitoba 1951	142	174,717	76,986,941	12,971,325	90,439,708
1952	134	133,166	77,062,408	14,318,773	92,290,469
1953	132	130,692	76,208,672	14,004,409	90,854,401
Saskatchewan 1951	552	393,529	216,467,659	34,756,876	252,920,020
1952	539	364,417	261,959,695	40,260,979	304,974,010
1953	527	373,071	300,619,619	46,294,714	349,693,006
Alberta 1951	224	218,051	157,971,582	19,186,237	179,812,287
1952	179	194,839	182,331,593	13,927,971	197,035,819
1953	190	231,643	165,271,398	17,649,362	183,498,060
British Columbia 1951	121	42,255	43,238,489	14,450,609	58,731,057
1952	109	41,980	49,372,830	15,794,106	65,997,367
1953	99	53,671	47,874,049	15,014,246	64,513,048
Interprovincial 1951	7	120,421	72,909,845	10,117,926	84,388,511
1952	7	148,807	92,467,199	26,765,819	120,770,992
1953	6	156,200	100,191,229	23,696,443	141,634,862
Totals 1951	**2,348**	**1,184,235**	**769,264,824**	**209,985,815**	**988,459,832**
1952	**2,194**	**1,108,803**	**840,113,835**	**234,848,220**	**1,085,854,744**
1953	**2,221**	**1,195,985**	**876,287,346**	**256,730,885**	**1,160,280,706**

[1] Includes other revenue.

Section 6.—Interprovincial Freight Movements*

Statistics on interprovincial trade are difficult to collect because there are no controls or barriers to it. The only comprehensive statistics available are the loadings and unloadings of freight carried by the railways. Railway traffic is segregated into 76 classes of freight and the differences between loadings and unloadings are the imports and exports *by rail* for the respective provinces. Freight can, however, be imported by rail and exported by water, as with western grain which may be moved to the Ontario ports of Fort William and Port Arthur. Consequently, the statistics of Table 48 must not be taken as a measure of total interprovincial trade: these figures indicate interprovincial movement of railway freight which is one aspect only of that trade.

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* Revised in the Transportation Section, Public Finance and Transportation Division, Dominion Bureau of Statistics.

48.—Railway Revenue Freight Movement, by Province, 1952 and 1953

Province	Loaded		Received from Foreign Connections		Totals Originated[1]	
	1952	1953	1952	1953	1952	1953
	tons	tons	tons	tons	tons	tons
Newfoundland	1,254,435	1,202,044	20	—	1,254,455	1,202,044
Prince Edward Island	291,917	294,676	6	—	291,923	294,676
Nova Scotia	9,640,340	9,434,283	136,136	129,166	9,776,476	9,563,449
New Brunswick	4,165,830	3,559,222	705,230	651,582	4,871,060	4,210,804
Quebec	19,758,883	18,045,029	8,508,728	8,090,620	28,267,611	26,135,649
Ontario	42,504,480	39,718,173	25,168,671	25,152,012	67,673,151	64,870,185
Manitoba	7,999,084	7,283,576	550,929	569,689	8,550,013	7,853,265
Saskatchewan	15,056,856	16,278,641	229,120	251,914	15,285,976	16,530,555
Alberta	13,956,795	13,532,072	89,389	68,758	14,046,184	13,600,830
British Columbia	10,714,787	10,712,215	1,173,901	1,133,380	11,888,688	11,845,595
Totals	**125,343,407**	**120,059,931**	**36,562,130**	**36,047,121**	**161,905,537**	**156,107,052**

Province	Unloaded		Delivered to Foreign Connections		Totals Terminated[1]	
	1952	1953	1952	1953	1952	1953
	tons	tons	tons	tons	tons	tons
Newfoundland	1,210,989	1,203,186	177,793	144,340	1,388,782	1,347,526
Prince Edward Island	474,913	408,657	3,636	689	478,549	409,346
Nova Scotia	8,177,425	8,315,255	706,954	766,820	8,884,379	9,082,075
New Brunswick	3,466,361	3,128,646	2,410,217	1,994,799	5,876,578	5,123,445
Quebec	22,386,903	20,558,052	10,115,179	8,696,299	32,502,082	29,254,351
Ontario	53,132,159	50,898,412	25,343,482	25,385,880	78,475,641	76,284,292
Manitoba	7,235,126	7,057,433	938,136	800,083	8,173,262	7,857,516
Saskatchewan	4,567,362	4,617,015	893,018	872,879	5,460,380	5,489,894
Alberta	5,583,164	6,118,269	26,176	31,988	5,609,340	6,150,257
British Columbia	8,702,590	8,555,454	6,002,889	5,829,896	14,705,479	14,385,350
Totals	**114,936,992**	**110,860,379**	**46,617,480**	**44,523,673**	**161,554,472**	**155,384,052**

[1] Figures for freight originating and freight terminating do not agree because freight that originates within a certain year does not all terminate within the same year; some that terminated in 1952, for instance, originated within the previous year.

PART II.—GOVERNMENT AIDS TO AND CONTROL OF DOMESTIC TRADE

During the post-war period, the elaborate system of government control of trade that the war effort made necessary was gradually relaxed (*see* the 1948-49 Year Book, pp. 837-841) until, by the beginning of 1949, only those measures to protect domestic requirements and prevent the forcing upward of prices in the Canadian market remained; since then even these have practically disappeared.

Section 1.—Controls Affecting the Handling and Marketing of Grain

The agencies exercising control of the grain trade in Canada include the Board of Grain Commissioners, which since 1912 has administered the provisions of the Canada Grain Act and the Canadian Wheat Board, which operates under the Canadian Wheat Board Act, 1935. The former is a quasi-judicial and administrative body which, through the powers vested in it in matters of interprovincial transportation and patents and copyrights, gives the Federal Government complete power to control the handling of grain; it has no power or duties in respect of grain prices. The Canadian Wheat Board, which began to function in the autumn of 1935, was a natural outgrowth of government stabilization measures that were taken during the depression years of the 1930's in regard to the marketing of grain crops. During this period, the Government acquired a considerable quantity of wheat and, in the 1935 session of Parliament, legislation was passed to serve the dual purpose of disposing of the holdings so acquired and, at the same time, arranging for the marketing of new crops.

An account of the organization and functions of the Board of Grain Commissioners appears in the 1941 Year Book, pp. 481-482. An article on the operations of the Canadian Wheat Board is commenced in the 1939 Year Book, pp. 569-580, and concluded in the 1947 edition.

Section 2.—Combinations in Restraint of Trade*

The purpose of Canadian anti-combines legislation is to assist in maintaining free and open competition as a prime stimulus to the achievement of maximum production, distribution and employment in a system of free enterprise. To this end, the legislation seeks to eliminate certain practices in restraint of trade that are harmful to a system of free enterprise, practices which serve to prevent the nation's economic resources from being fully used under a system of open competition for the advantage of all citizens.

The first federal legislation in this field was enacted in 1889 and is still effective in amended form as Sect. 411 of the Criminal Code.

The Combines Investigation Act.—The Combines Investigation Act (R.S.C. 1952, c. 314), was enacted in 1923, carried into the Revised Statues of Canada for 1927, as Chapter 26, and amended in 1935, 1937, 1946, 1949, 1951, 1952 and 1954. It provides for the investigation of combinations, mergers, trusts and monopolies that have operated or are likely to operate to the detriment of the public by limiting production, fixing or enhancing prices or otherwise restraining trade. The Act defines such combinations, mergers, trusts and monopolies as "combines" and makes participation in the formation or operation of a combine an indictable offence. The Act also provides for the investigation of complaints about the practice of resale price maintenance, which is forbidden by Sect. 34 of the Act, and complaints about breaches of Sects. 411 and 412 of the Criminal Code† which relate to conspiracy in restraint of trade and certain discriminatory pricing practices respectively.

The functions of investigating and reporting upon alleged violations which formerly were vested in a single Commissioner have, since 1952, been exercised by an agency for investigation and research under a Director of Investigation and Research, and a board known as the Restrictive Trade Practices Commission, which consists of three members, and has the function of appraising the evidence obtained in investigations and reporting thereon.

The report to the Minister of Justice of an investigation into the manufacture, distribution and sale of matches in Canada, submitted in December 1949, alleged that a combine by way of merger, trust or monopoly existed in the wooden match industry in Canada. Four formal charges were preferred under the Combines Investigation Act. The trial of the first charge concluded at Montreal, Que., in May 1951 with the five corporation defendants being convicted and fined a total of $85,000 and costs. The accused appealed the conviction and sentence to the Quebec Court of Queen's Bench (Appeal Side), but the appeal was dismissed Nov. 30, 1953. Application by the accused for leave to appeal to the Supreme Court of Canada was refused on Dec. 22, 1953. The remaining three charges have been withdrawn.

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* Revised by T. D. MacDonald, Q.C., Director of Investigation and Research, Combines Investigation Act, Department of Justice, Ottawa.

† Formerly Sects. 498 and 498A.

A report was submitted to the Minister of Justice on May 21, 1952, alleging the existence of combines in six divisions of the rubber industry. In 1953, prosecutions were instituted under Sect. 498 of the Criminal Code in regard to three divisions of the industry, namely mechanical rubber goods, tires and tubes and rubber footwear. Each of the accused pleaded guilty and fines totalling $220,000 and costs were imposed. In the mechanical case an application was also made on behalf of the Crown for an order prohibiting the continuation or repetition of the offence. The order was granted by the trial judge and upheld with a variation by the Ontario Court of Appeal Apr. 26, 1954. The application of the accused for leave to appeal to the Supreme Court of Canada was granted in January 1955 and the hearing of the appeal is pending. Applications for similar orders in the other two cases are in abeyance pending the appeal in the mechanical case.

In a report submitted to the Minister of Justice in October 1952, a combine was alleged to exist in the fine paper industry. Prosecution was instituted in 1953 in the Supreme Court of Ontario and on June 4, 1954, seven manufacturers, twenty-one incorporated fine paper merchants, one individual fine paper merchant and one trade association secretary were found guilty as charged under Sect. 498 of the Criminal Code and subsequently were fined a total of $242,000. The Court granted an order of prohibition pursuant to Sect. 31 of the Combines Investigation Act against the accused but directed that the order will not come into effect until the appeal in the mechanical rubber goods case has been disposed of and, if the appeal is allowed on constitutional grounds the order will not come into effect at all. The accused have appealed the conviction and sentence to the Ontario Court of Appeal.

On Jan. 22, 1953, a report was submitted to the Minister of Justice alleging that, at the time of commencement of the inquiry in 1949, a combine existed in connection with the distribution and sale of coarse papers in and around Vancouver. A prosecution under Sect. 498 was instituted in February 1954 against seven wholesale companies and three manufacturers. Following a preliminary hearing in Vancouver, the accused were committed for trial, in August 1954. At the commencement of the trial in the Supreme Court of British Columbia on Oct. 25, 1954, the seven wholesale companies and one manufacturer pleaded guilty. The trial of the two remaining manufacturers is now in progress.

In a report made to the Minister of Justice in November 1953, a combine was alleged to exist in connection with the distribution and sale of electrical wire and cable products in Canada and nine manufacturers and the selling organization of one of them were named as parties to the alleged combine. In 1954, prosecution was instituted under Sect. 498 of the Criminal Code against nine manufacturing companies and the sales company of one of them. The trial in the Supreme Court of Ontario commenced at Toronto on Jan. 10, 1955.

In May 1953, the Restrictive Trade Practices Commission submitted its first report to the Minister of Justice. This report dealt with two alleged attempts by certain officials of the Montreal District Office of a manufacturer of soap products to persuade wholesalers to sell at prices suggested by the Company. On Nov. 16, 1953, the Minister of Justice announced that the opinion of counsel, with which he concurred, was that the case was not a suitable one for prosecution, as the offence was technical and isolated and had been committed without the knowledge and approval of the management of the Company, and apparently against its policy.

Also in May 1953, the Commission submitted a report to the Minister of Justice concerning alleged price discrimination by a manufacturer between retail hardware dealers in North Bay. The Commission stated it did not feel that it should express an opinion as to whether an offence had been committed, nor did it feel the evidence permitted it to draw general conclusions about the industry. On Nov. 16, 1953, the Minister announced that the opinion of counsel, with which he concurred, was to the effect that this was a borderline case of a technical violation and was not a suitable case upon which to found the first prosecution under Sect. 498A of the Criminal Code unless the conduct was persisted in.

In a report in January 1954, concerning an alleged attempt at resale price maintenance in the sale of certain household supplies in the Chicoutimi-Lake St. John district, the Commission concluded that there was an attempt at resale price maintenance on the part of a salesman of a manufacturer of these supplies, although responsibility for this should not, in the particular circumstances, be imputed to the Company itself. Following the institution of prosecution proceedings under Sect. 34 of the Combines Investigation Act in the police court at Chicoutimi, Que., a plea of guilty was entered by the salesman and he was fined $5 and costs on Nov. 18, 1954.

In February 1954, the Commission submitted a report concerning an investigation into the distribution and sale of gasoline in the Vancouver area. The report expressed the conclusion that gasoline retailers had entered into agreements or arrangements fixing and enhancing the retail price of gasoline, preventing or lessening competition, and substantially controlling the retail sale of gasoline in the area concerned. Prosecution proceedings under Sect. 32 of the Combines Investigation Act against two incorporated trade associations and 32 individuals were instituted in Vancouver, B.C. in January 1955.

In a report in March 1954, concerning alleged instances of resale price maintenance in the sale of china and earthenware, the Commission concluded that a Canadian distributor for figures and other earthenware products had induced or attempted to induce various retailers in Ontario, Quebec, and British Columbia to maintain retail prices specified by such distributor and had also induced a Vancouver wholesaler to maintain wholesale prices specified by it. The Commission also found that the distributor had attempted to induce four Vancouver wholesalers to refrain from selling figures to a Vancouver retailer because the retailer had been selling them at prices less than the resale price specified by such distributor; also, that one such wholesaler had refused to supply the retailer in question for this reason. Following the institution of prosecution proceedings under Sect. 34 of the Combines Investigation Act in the police court at Toronto, Ont., the distributor pleaded guilty on Nov. 17, 1954, and was fined a total of $1,000 on two counts.

A report of an inquiry concerning alleged instances of resale price maintenance in the distribution and sale of television sets in the Toronto district was submitted by the Commission to the Minister on Oct. 25, 1954, and made public by him on Nov. 18, 1954. The report stated that, following a newspaper advertisement by a dealer offering television sets of a particular manufacture at substantially reduced prices, the manufacturer in question had cancelled the dealer's franchise. The cancellation was made by the Toronto branch manager of the manufacturer, acting upon his own responsibility as the officer in charge of sales in that district. The report expressed the opinion that the evidence, in which there was considerable conflict, was not strong enough to prove that the motive of the Company official who cancelled the franchise had been resale price maintenance.

In November 1954, the Commission submitted a report to the Minister concerning an alleged combine in the manufacture, distribution and sale of wire fencing in Canada. The report expressed the conclusion that from 1933 to mid-1952 Canadian manufacturers of wire fencing operated under arrangements directed principally to the maintenance of prices and elimination of price competition. It also expressed the opinion that while the arrangements referred to had been formally terminated in mid-1952, because of the long existence and continuous operation of these arrangements, the acceptance of common prices by the manufacturers had, nonetheless, virtually become a custom of the trade. In making the report public on Nov. 30, 1954, the Minister indicated that the usual consideration would be given the question of what further steps ought to be taken.

A report of an inquiry concerning an alleged combine in the distribution and sale of coal in the Timmins-Schumacher area in Ontario was submitted by the Commission to the Minister on Nov. 22, 1954, and made public by him on Dec. 14, 1954. The report concluded that, since 1947, the retail dealers handling substantially all of the coal trade in the area had been parties to a price fixing agreement; and that, because of the location of this particular market, no effective competition could be expected from outside the area. The Commission also stated that evidence showed that when the coal dealers or some of them found that price competition could not be controlled to their satisfaction through their own efforts, they prevailed upon suppliers to come to their assistance by discontinuing supplies to the dealers who were not maintaining prices. In releasing the report, the Minister indicated that the usual consideration would be given the question of what further steps ought to be taken.

As a result of the recommendation of the MacQuarrie Committee* that the practice of "loss-leader" selling should be studied, an inquiry was instituted for the purpose of determining the prevalence and effects of the practice and recommending to the Minister of Justice suitable amendment, if necessary, of the Combines Act. The information supplied to or gathered by the Director of Investigation and Research was compiled in book form and laid before the Commission in February 1954. This book was then supplied by the Commission to parties who wished to make submissions or supply further information and, with this in view, the Commission arranged for public hearings to be held at various centres in Canada in May, June, July and September 1954. A report is being prepared for submission to the Minister of Justice.

During 1953 and 1954, a variety of matters were disposed of on preliminary inquiry, and in a number of other cases investigations were proceeding. Numerous consultations and interviews were held with individuals and representatives of business groups interested in discussing the possible application of the Act to conditions encountered or to arrangements being considered.

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* Committee to Study Combines Legislation comprising Mr. Justice J. H. MacQuarrie of the Supreme Court of Nova Scotia; Dr. W. A. Mackintosh, Principal of Queen's University; Professor Maurice Lamontagne, then Director of the Department of Economics, Laval University; and Mr. George F. Curtis, Dean of the University of British Columbia Law School. The Committee reported upon resale price maintenance in October 1951 and made its final report in March 1952.

Section 3.—Trade Standards*

The Standards Division of the Department of Trade and Commerce consolidates, under one Director, the administration of the Electricity Inspection Act, the Gas Inspection Act, the Electricity and Fluid Exportation Act, the Precious Metals Marking Act, the Weights and Measures Act, and the National Trade Mark and True Labelling Act.

Commodity Standards.—On Nov. 26, 1949, Parliament passed the National Trade Mark and True Labelling Act which provides a framework for the development of the National Standard and true labelling in order to circumvent public deception in advertising.

In brief, the use of the National Standard is voluntary and compliance with commodity standards affects only those manufacturers who desire to use the national trade mark. In addition, where manufacturers descriptively label any commodity or container, it must be labelled accurately to avoid public deception. The regulation applying to the labelling of fur garments, for example, has been established as a code of fair practice throughout the merchandising field.

Under the terms of the Precious Metals Marking Act, 1946 (R.S.C. 1952, c. 215), commodities composed of gold, silver, platinum or palladium may be marked with a quality mark describing accurately the quality of the metal. Where such mark is used, a trade mark registered in Canada, or for which application for registration has been made, must also be applied. Gold-plated or silver-plated articles may also be marked under certain conditions outlined in the Act. The inspection staff of the Standards Division is engaged in the examination of advertising matter, in verifying the quality of articles offered for sale and in checking the marks applied.

Weights and Measures.—The Weights and Measures Act (R.S.C. 1952, c. 292) prescribes the legal standard of weight and measure for use in Canada. The Act requires control of the type of all weighing and measuring devices used for commercial purposes and their periodic verification and surveillance directed towards the elimination of sales by short weight or short measure.

The number of inspections made in the year ended Mar. 31, 1954, was 478,227, compared with 437,644 in 1952-53. The more important inspections comprised the following: weighing machines, including scales of all kinds, 240,037; measuring machines for liquids, 92,701; weights, 140,053; other measures, 5,436. Total expenditure was $688,425 in 1953-54 compared with $659,975 in 1952-53, and total revenue $658,466 compared with $600,641.

Electricity and Gas Inspection.—Responsibilities of the Standards Division under the Electricity Inspection Act (R.S.C. 1952, c. 94) and the Gas Inspection Act (R.S.C. 1952, c. 129) comprise the testing and stamping of every electricity and gas meter used throughout Canada for billing purposes, the object being to ensure the correct measurement of all electricity and gas sold. Canada is divided into 21 districts for administration of the two Acts, and staff numbers 158. During the year ended Mar. 31, 1954, 1,079,711 electricity and gas meters were tested as compared with 928,827 in the preceding year. Revenue derived from the testing amounted to $790,753 and expenditure to $608,519.

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* Prepared by R. W. MacLean, Director, Standards Division, Department of Trade and Commerce, Ottawa.

1.—Electricity and Gas Meters in Use, Years Ended Mar. 31, 1945-54

Year	Electricity Meters	Gas Meters				
		Manufactured Gas	Natural Gas	Acetylene Gas	Petroleum Gas	Total
	No.	No.	No.	No.	No.	No.
1945	2,348,150	552,411	208,046	4	1,529	761,990
1946	2,459,672	550,949	215,330	4	1,651	767,934
1947	2,647,040	560,046	225,952	4	1,725	787,727
1948	2,746,685	587,629	217,068	3	1,046	805,746
1949	2,972,725	600,923	227,393	3	4,006	832,325
1950[1]	3,188,013	606,395	239,448	4	3,841	849,688
1951	3,405,432	610,096	252,468	5	33	862,602
1952	3,590,422	609,262	263,130	5	68	872,465
1953	3,779,739	599,140	277,248	5	1,270	877,663
1954	3,967,952	593,698	298,166	4	429	892,297

[1] Figures for Newfoundland included for 1950 and subsequent years.

The Electricity and Fluid Exportation Act (R.S.C. 1952, c. 93) came into force in 1907. Under its provisions no electric energy or fluid, whether liquid or gaseous, may be exported from Canada without a licence. Total exports of electric energy during the year ended Mar. 31, 1954, amounted to 2,209,532,219 kwh. There was also a small export of natural gas and crude oil.

Section 4.—Patents, Copyrights and Trade Marks*

Letters patent are issued subject to the provisions of the Patent Act, 1935 (R.S.C. 1952, c. 203). Applications for protection relating to patents should be addressed to the Commissioner of Patents, Ottawa.

2.—Patents Applied for, Granted, etc., Years Ended Mar. 31, 1950-54

Item		1950	1951	1952	1953	1954
Applications for patents	No.	13,172	14,324	15,448	16,405	18,565
Patents granted	"	8,513	8,461	9,516	9,700	9,414
Granted to Canadians	"	*655*	*627*	*708*	*742*	606
Caveats granted	"	356	391	253	243	288
Assignments	"	12,811	11,437	11,621	12,525	13,127
Fees received, net	$	636,772	661,069	728,241	756,714	847,874

The number of Canadian patents granted increased fairly steadily each year from 4,522 at the beginning of the century to a peak of 12,542 in 1923 and has remained between 6,500 and 10,000 for the past ten years. Of the 9,414 granted in 1953-54, 6,849 or 73 p.c. were to inventors resident in the United States, 606 to Canadian residents and 1,013 to residents of the United Kingdom or other Commonwealth countries. Residents of France obtained 198, of Switzerland 143, of The Netherlands, 207, and of other countries 398.

Printed copies of patents issued from Jan. 1, 1949, to date are available at a nominal fee. The Canadian *Patent Office Record* gives a brief digest of each patent.

Canadian and foreign patents may be consulted at the Patent Office Library. The Library has records of British patents and abridged specifications thereof from 1617 to date, and of United States patents from 1872 to date, as well as many patents, indexes, journals and reports from Australia, New Zealand, South Africa, India, Pakistan, France, Belgium, Austria, Norway, Mexico, Italy, Sweden, The Netherlands, Switzerland, Japan, Korea and Brazil.

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* The material relating to patents and copyrights was revised by J. W. T. Michel, Commissioner of Patents, and that relating to trade marks by J. P. McCaffrey, Registrar of Trade Marks, Department of the Secretary of State, Ottawa.

Copyrights, Industrial Designs and Timber Marks.—Registration of copyright is governed by the Copyright Act, 1921 (R.S.C. 1952, c. 55). Applications for protection relating to copyrights should be addressed to the Commissioner of Patents, Ottawa.

The Act sets out the qualifications for a copyright and its duration: "Copyrights shall subsist in Canada. . .in every original literary, dramatic, musical and artistic work, if the author was, at the date of the making of the work, a British subject, a citizen or subject of a foreign country which has adhered to the Berne Convention and the additional Protocol. . .or resident within Her Majesty's Dominions. The term for which the copyright shall subsist shall, except as otherwise expressly provided by this Act, be the life of the author and a period of fifty years after his death".

Copyright protection is extended to records, perforated rolls, cinematographic films, and other contrivances by means of which a work may be mechanically performed. The intention of the Act is to enable Canadian authors to obtain full copyright protection in Canada, in all parts of the Commonwealth, in foreign countries of the Copyright Union and in the United States of America.

Protection of industrial designs and of timber marks is afforded under the Trade Mark and Design Act and the Timber Marking Act. Registers of such designs and marks are kept by the Copyright Branch of the Patent Office and information regarding them is published in the Canadian *Patent Office Record.*

3.—Copyrights, Industrial Designs and Timber Marks Registered, Years Ended Mar. 31, 1950-54

Item		1950	1951	1952	1953	1954
Copyrights registered	No.	4,488	4,700	4,676	4,976	5,060
Industrial designs registered	"	653	628	480	431	560
Timber marks registered	"	7	4	10	1	2
Assignments registered	"	426	512	497	523	548
Fees received, net	$	19,325	19,848	19,382	20,681	21,181

Trade Marks and Shop Cards.—The Trade Marks Office, a Branch of the Department of the Secretary of State, is charged with the administration of the Unfair Competition Act, 1932 (R.S.C. 1952, c. 274) which repealed all previous Acts governing trade marks, and the Shop Cards Registration Act, which came into force on Sept. 1, 1938. Applications for registration of trade marks and shop cards should be addressed to the Registrar, Trade Marks Office, Ottawa.

A register of Trade Marks is kept, in which, subject to the provisions of the Act, any person may cause to be recorded any trade mark he has adopted and notification of any assignments, transmissions, disclaimers and judgments relating to such trade mark. In order that the public may be kept informed in the matter of trade-mark registration, a list of registered trade marks appears in the Canadian *Patent Office Record* which is issued weekly.

The Shop Cards Registration Act is designed to afford a measure of protection to organizations, such as trade unions, that were able formerly to register their particular designations as Union Labels under the Trade Mark and Design Act. Registrations under the Act may be renewed every 15 years.

4.—Trade Marks and Shop Cards Registered, Years Ended Mar. 31, 1949-53

Item		1949	1950	1951	1952	1953
Trade marks registered	No.	3,936	3,408	3,309	2,806	2,981
Trade-mark registrations assigned	"	1,719	1,485	1,665	1,535	1,499
Trade-mark registrations renewed	"	2,033	2,064	2,085	2,266	2,139
Certified copies prepared	"	529	642	699	619	541
Shop cards registered	"	—	1	1	—	—
Fees received, net	$	122,147	132,228	132,744	127,053	138,524

Section 5.—Subventions and Bounties on Coal*

The major problem of the Canadian coal-mining industry arises from the fact that its fields are situated far distant from the main consuming markets of the Provinces of Ontario and Quebec while these markets lie in close proximity to the bituminous and anthracite fields of the United States. Transportation subventions, which have been maintained in varying degree during the past 25 years, were designed to further the movement of Canadian coals to some portions of central Canada by equalizing, as far as possible, the laid-down costs of Canadian coals with imported coals. Subventions have been regulated by Orders in Council as it has not been considered practicable to fix the assistance by statute owing to the frequent changes in the competitive situation.

5.—Expenditure for Subventions, by Province, 1949-53

Province		1949	1950	1951	1952	1953
Nova Scotia	ton	1,853,604	1,165,719	2,286,537	1,897,451	1,874,410
	$	2,435,111	1,005,438	3,074,466	5,194,288	6,101,714
New Brunswick	ton	3,025	2,314	2,709	2,851	8,981
	$	3,838	1,939	2,634	3,780	7,853
Saskatchewan	ton	94,957	173,694	165,086	139,555	187,118
	$	64,933	125,767	126,042	113,645	161,439
Alberta and eastern British Columbia	ton	441,938	785,148	589,581	613,651	606,749
	$	897,970	1,482,202	1,163,937	1,161,810	946,638
British Columbia bunker and export	ton	36,170	6,092	91,611	59,254	1,592
	$	29,893	4,569	88,551	56,580	1,194
Totals	**ton**	**2,429,692**	**2,132,970**	**3,135,523**	**2,712,762**	**2,678,850**
	$	**3,431,745**	**2,619,915**	**4,455,629**	**6,530,103**	**7,218,838**

The Canadian Coal Equality Act (R.S.C. 1952, c. 34—formerly known as the Coke Bounty Act) implemented one of the recommendations of the Royal Commission on Maritime Claims and was approved by Parliament on May 30, 1930. The bounty is paid on Canadian coal converted to coke and used in the manufacture of Canadian iron and steel and places the coal on a basis of equality with imported coal.

Bounties paid under this authority for the years 1949-53 were as follows:—

Item		*1949*	*1950*	*1951*	*1952*	*1953*
Quantity	ton	740,288	830,752	810,608	698,449	773,102
Amount	$	366,443	411,222	401,251	345,732	382,685

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* Prepared by H. H. Harris, Administrative Officer, Dominion Coal Board, Ottawa. Additional information on subventions and bounties summarized from the *Report of the Royal Commission on Coal, 1946*, is given in the 1947 Year Book, pp. 770-771.

Section 6.—Control and Sale of Alcoholic Beverages

The retail sale of alcoholic beverages in Canada is controlled by provincial and territorial government liquor-control authorities. Alcoholic beverages are sold directly by most of these liquor-control authorities to the consumer or to licensees for resale. However, in some provinces beer and wine are sold directly by breweries and wineries to consumers or to licensees for resale. During the year ended Mar. 31, 1953, provincial government liquor-control authorities operated 650 retail stores.

Table 6 shows revenue from administration of liquor control by provincial and territorial governments. The figures have been prepared on a new basis so that the detail is not strictly comparable with the information supplied in previous Year Books. Further details are given in DBS report *The Control and Sale of Alcoholic Beverages in Canada,* (fiscal year ended Mar. 31, 1953).

6.—Provincial and Territorial Revenue from Administration of Liquor Control, Year Ended Mar. 31, 1953, with Totals for 1952

Note.—Figures include revenue collected directly by the provincial and territorial governments as well as revenues of the liquor authorities, but exclude general sales tax.

Province or Territory	Net Income from Retail Sales[1]	Taxes	Licences and Permits[2]	Fines and Confiscations[2]	Commission on General Sales Tax Collections	Total Revenue Mar. 31—	
						1953	1952
	$	$	$	$	$	$	$
N'f'ld	2,202,937	—	598,013[3]	18,814	4,656	2,824,420	2,476,000
P.E.I	895,975	273,675	31,956	17,650	—	1,219,256	1,035,000
N.S	9,179,324	—	278,101	73,657	—	9,531,082	8,562,000
N.B	6,377,969	—	1,970	24,929	21,419	6,426,287	5,441,000
Que	21,643,113	1,490,979	11,975,916	178,890	..	35,288,898	32,357,000
Ont	33,076,007	—	14,532,066	82,926	—	47,690,999	44,960,000
Man	6,408,691	—	2,084,847	63,000	—	8,556,538	8,224,000
Sask	10,864,296	—	85,143	63,814	46,817	11,060,070	9,640,000
Alta	13,944,913	—	1,014,948	197,077	—	15,156,938	13,304,000
B.C	20,551,839	—	283,307	..	47,803	20,882,949	20,157,000
Totals	**125,145,064**	**1,764,654**	**30,886,267**	**720,757**	**120,695**	**158,637,437**	**146,156,000**
Yukon T	652,770	—	93	109	—	652,972	595,000
N.W.T	282,683	—	4,363	2,279	—	289,325	274,000
Canada	**126,080,517**	**1,764,654**	**30,890,723**	**723,145**	**120,695**	**159,579,734**	**147,025,000**

[1] After provision for depreciation on fixed assets or for capital expenditure met out of operating income as follows: N'f'ld., $967; P.E.I., $1,000; N.S., $39,187; N.B., $150,240; Que., $60,276; Ont., $1,048,202; Man., $28,419; Sask., $27,670; Alta., $42,585 and B.C., $137,784. Also deducted are expenses incurred by liquor authorities in the collection of other revenue.

[2] Before deduction of any payments to municipalities out of liquor control authority revenue.

[3] Includes $536,396 commission on beer sold direct from local provincial breweries to public through licensed outlets under controlled price.

Specified revenue of the Government of Canada from alcoholic beverages comprising excise duties, excise taxes, customs duties and certain fees and licences in that connection are shown in Table 7. Federal Government revenues from the general sales tax on alcoholic beverages, however, are not available.

7.—Specified Revenue of the Federal Government from Alcoholic Beverages, Years Ended Mar. 31, 1949-53

NOTE.—Figures exclude revenue from the 10-p.c. sales tax which is not available by commodities.

Nature of Levy	1949	1950	1951	1952	1953
	$	$	$	$	$
On Spirits—					
Excise duty	40,634,698	46,547,587	60,126,300	42,066,718	41,058,349
Validation fees	825,371	790,587	1,108,252	1,223,932	746,877
Licences	6,750	7,250	8,000	7,375	7,750
Import duty[1]	28,592,975	27,249,087	30,975,045	38,798,542	52,373,987
Totals, on Spirits	**70,059,794**	**74,594,511**	**92,217,597**	**82,096,567**	**94,186,963**
On Malt and Malt Products—					
Excise duty on—					
Beer[2]	3,740,065	3,678,316	2,745,851	3,812,065	5,294,283
Malt	55,853,055	56,018,292	65,409,427	73,748,003	80,584,283
Malt extract	51,825	—	—	—	—
Licences—					
Beer	3,550	3,550	3,650	3,500	3,600
Malt	600	—	—	—	—
Import duty on beer	43,955	54,388	75,547	106,916	114,629
Totals, on Malt and Malt Products	**59,693,050**	**59,754,546**	**68,234,475**	**77,670,484**	**85,996,795**
On Wine—					
Excise taxes	2,059,639	2,125,606	2,224,885	2,167,267	2,215,540
Import duty	580,327	587,451	696,436	771,733	879,901
Totals, on Wine	**2,639,966**	**2,713,057**	**2,921,321**	**2,939,000**	**3,095,441**
Grand Totals	**132,392,810**	**137,062,114**	**163,373,393**	**162,706,051**	**183,279,199**

[1] Collections on liquor imported for blending purposes are included with import duty. [2] Other than malt beer.

Value of Sales of Alcoholic Beverages.—The figures in Table 8 do not represent the final retail selling price of alcoholic beverages because when sold to licensees, only the selling price to the licensee is known. Furthermore, these sales figures should not be construed as representing the amount spent by individual Canadian consumers because sales to non-residents visiting Canada and sales to businesses, governments and foreign embassies in Canada are included.

8.—Value of Sales of Alcoholic Beverages, Years Ended Mar. 31, 1952 and 1953

Province or Territory	Spirits		Wines		Beer		Total	
	1952	1953	1952	1953	1952	1953	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	3,485	3,772	299	356	1,799	2,661	5,583	6,789
Prince Edward Island	..	..	..	..	..	..	2,347	2,736
Nova Scotia	11,155	12,212	1,596	1,835	10,596	11,955	23,347	26,002
New Brunswick	8,727	9,167	1,695	1,644	5,879	7,046	16,301	17,857
Quebec	55,704	60,647	7,399	8,342	77,747	86,057	140,850	155,046
Ontario	92,082	99,090	11,095	11,416	124,831	164,722	228,008	275,228
Manitoba	12,876	13,836	1,601	1,636	15,780	20,200	30,257	35,672
Saskatchewan	11,911	13,590	1,863	1,928	18,391	21,736	32,165	37,254
Alberta	..	22,220	..	1,815	24,919	27,629	45,457	51,664
British Columbia	38,865	40,064	2,525	2,549	24,842	28,217	66,232	70,830
Yukon	918	1,020	36	41	687	746	1,641	1,807
Northwest Territories	..	438	..	23	360	305	760	766
Canada	**235,723**	**276,056**	**28,109**	**31,585**	**305,831**	**371,274**	**592,948**	**681,651**

PART III.—BANKRUPTCIES AND COMMERCIAL FAILURES

The three Sections of this Part, although closely related as far as subject matter is concerned, cover different aspects of the field of bankruptcies and commercial failures and the statistics presented in each Section are not comparable with those given in the other Sections.

Section 1 is limited to the administration of bankrupt estates by the Superintendent of Bankruptcy under the Bankruptcy Act (including the Farmers' Creditors Arrangement Act). This Section, however, gives definite information on the amounts realized from the assets as established by debtors and indicates that values actually paid to creditors are invariably very much lower than such estimates alone would imply. It can, therefore, be assumed that this applies in even greater degree to the more extended fields covered in Sections 2 and 3.

Section 2, on the other hand, is limited to bankruptcies and insolvencies made under federal legislation (the Bankruptcy Act and the Winding-Up Act) but not failures, sales or seizures carried out apart from such federal legislation. The Dominion Bureau of Statistics figures include failures of individuals such as wage-earners. For recent years, separate data are shown for insolvencies by wage-earners as distinct from industrial and commercial mortalities. The figures of assets and liabilities are estimates made by the debtor and, unfortunately, are not made uniformly. The human element enters into them to a considerable degree and they should, therefore, be accepted with reservations.

The statistics given in Section 3 are compiled by Dun and Bradstreet, Incorporated. This mercantile agency is interested primarily in credit information and their statistics include bankruptcies in general, insolvencies under provincial companies' Acts and such proceedings as bulk sales, bailiffs' sales, landlords' seizures, etc., when loss to creditors results. On the other hand, the statistics do not include assignments of individuals, so that, as a rule, the totals run lower than those in Section 2. Since between the years 1875 and 1919 this agency was the only source of figures of commercial failures, their statistics have an added value because they present a historical series back to 1915 though the basis of classification was changed after 1933 (*see* text preceding Table **7**, p. 1023).

Section 1.—Administration of Bankrupt Estates*

Federal insolvency legislation now comprises the Bankruptcy Act, 1949 (R.S.C. 1952, c. 14), the Farmers' Creditors Arrangement Act, 1943 (R.S.C. 1952, c. 111), the Companies' Creditors Arrangement Act and, to some extent, the Winding-Up Act. The two Arrangement Acts are designed to avert failure and the statistics in this Section and in Section 2, therefore, do not include proposals or arrangements under these Acts. When such proposals or arrangements are rejected by the creditors or fail in their purpose the proceedings may then come under the Bankruptcy Act, the bankruptcy provisions of the Farmers' Creditors Arrangement Act and, in certain circumstances, the Winding-Up Act. There are no provisions in the Companies' Creditors Arrangement Act for the liquidation or winding-up of insolvent companies.

The Bankruptcy Act, 1949, under which the Bankruptcy Act, 1919, and amendments thereto is repealed, restores to all insolvent persons the right to make a proposal prior to bankruptcy. The summary administration provisions of the Act enable insolvent persons, other than corporations, having limited assets to obtain the benefit of the Act. A new principle has also been established in regard to the discharge of bankrupts and the Act provides that "the making of a receiving order against, or an assignment by, any person except a corporation operates as an application for discharge" unless a waiver is filed in court and served upon the trustee within the prescribed delays.

The administration of bankrupt estates is supervised by the Superintendent of Bankruptcy, first appointed in 1932, with the object of conserving, as far as possible, the assets of bankrupt estates for the benefit of the creditors.

The series of statistics collected on estates closed under the Bankruptcy Act, 1919, covering the years 1933-50 are given in the 1947 Year Book, p. 846, and the 1952-53 edition, p. 915. The figures given in Table **1** are those of estates closed under the new Bankruptcy Act and begin with the year 1951. Figures for the year 1951 are given in the 1954 edition, p. 955.

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* Prepared by the Superintendent of Bankruptcy, Ottawa. Early bankruptcy and insolvency legislation is reviewed in the 1952-53 Year Book, pp. 914-915.

1.—Assets, Liabilities, Assets Realized and Cost of Administration under the Bankruptcy Act 1949, by Province, 1952 and 1953

Province and Year	Estates Closed	Assets Estimated by Debtor	Liabilities Estimated by Debtor	Total Realization	Cost of Administration	Paid to Creditors
	Bankruptcies Under General Provisions of the Act[1]					
1952	No.	$	$	$	$	$
Newfoundland	6	93,263	113,603	36,438	9,620	26,818
Prince Edward Island[2]	4	94,846	110,012	48,093	5,640	42,453
Nova Scotia[2]	8	144,214	171,955	94,670	14,570	80,100
New Brunswick[2]	15	181,173	269,771	34,434	12,360	22,074
Quebec	867	9,648,597	14,927,443	2,976,823	972,902	2,003,921
Ontario	186	3,358,999	5,177,981	998,993	280,306	718,687
Manitoba	18	498,659	803,794	143,125	28,830	114,295
Saskatchewan	15	130,048	211,024	50,763	23,577	27,186
Alberta	7	100,091	135,237	50,301	15,652	34,649
British Columbia	69	1,061,889	1,727,327	439,211	137,001	302,210
Totals, 1952	**1,195**	**15,311,779**	**23,648,147**	**4,872,851**	**1,500,458**	**3,372,393**[3]
	Proposals Under Sect. 27 (1) (a) of the Act					
	No.	$	$	$	$	$
Quebec	31	—	578,789	—	—	160,157
Ontario	2	—	28,039	—	—	5,276
Totals, 1952	**33**	—	**606,828**	—	—	**165,433**
Totals, 1951	**19**	—	**1,148,237**	—	—	**661,760**
	Bankruptcies Under General Provisions of the Act[1]					
1953	No.	$	$	$	$	$
Newfoundland	6	106,654	181,026	23,032	6,247	16,785
Prince Edward Island	2	45,333	53,050	7,224	2,840	4,384
Nova Scotia	8	137,672	481,066	76,112	14,667	61,445
New Brunswick	13	54,263	177,271	32,146	8,166	23,980
Quebec	941	10,235,103	17,492,331	2,871,410	1,079,254	1,792,156
Ontario	198	3,457,160	6,101,378	1,475,672	350,803	1,124,869
Manitoba	13	240,131	352,894	56,285	10,620	45,665
Saskatchewan	7	63,883	108,575	17,250	3,040	14,210
Alberta	12	219,551	502,875	120,478	25,429	95,049
British Columbia	56	949,570	1,807,091	221,798	66,130	155,668
Totals, 1953	**1,256**	**15,509,320**	**27,257,557**	**4,901,407**	**1,567,196**	**3,334,211**[3]
	Proposals Under Sect. 27 (1) (a) of the Act					
	No.	$	$	$	$	$
New Brunswick	3	—	31,742	—	—	8,762
Quebec	45	—	1,350,833	—	—	331,066
Ontario	3	—	58,870	—	—	17,141
Manitoba	1	—	79,633	—	—	22,821
British Columbia	2	—	6,532	—	—	3,524
Totals, 1953	**54**	—	**1,527,610**	—	—	**383,314**

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[1] Includes summary administration provisions of the Bankruptcy Act.

[2] Correction of figures published in the 1954 Year Book, p. 955.

[3] In addition to the amount paid to creditors by the trustee, secured creditors valued their security or realized on it themselves without the intervention of a trustee an amount of approximately $5,230,106 in 1952 and of $5,404,104 in 1953.

Summary statistics of estates closed under the Farmers' Creditors Arrangement Act are available in previous editions of the Year Book beginning with the 1947 edition. From the time the Act first came into effect on Sept. 1, 1934, to the end of 1949 there were 885 assignments and 39 receiving orders, or a total of 924 estates closed. No assignments or receiving orders were reported under the Act in 1951 or 1952 but one case was completed during 1952. During the year 1953, one new estate was reported and one case under administration was completed.

Section 2.—Returns under the Bankruptcy and Winding-Up Acts as Compiled by the Dominion Bureau of Statistics

As stated on p. 1017, the figures in this Section cover only the bankruptcies and insolvencies under federal legislation—the Bankruptcy Act and the Winding-Up Act—and include assignments of individuals such as wage-earners.

Under the Bankruptcy and Winding-Up Acts (R.S.C. 1952, cc. 14 and 296), certain documents relating to estates administered under these Acts have, since July 1920, been forwarded to the Dominion Statistician for statistical analysis. A statistical series began with 1923, except for the analysis by branches of business which began in 1924. However, changes in the administration of bankruptcies introduced by the Bankruptcy Act of 1949 (*see* p. 1018) affected the comparability of the series. In that Act, provision was made for proposals from insolvent persons and, since July 1950, agreements made under this method are not included with the statistics of bankruptcies. In Table **2** the number of proposals are shown so as to give a general impression of the trend.

2.—Bankruptcies and Insolvencies under Federal Legislation, by Province, 1944-53

NOTE.—Figures from 1923 are given in the corresponding table of previous Year Books beginning with the 1941 edition.

Year	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1944	...	—	3	—	222	33	1	3	4	11	277
1945	...	1	3	1	225	27	3	—	4	8	272
1946	...	1	3	2	236	20	—	—	4	12	278
1947	...	2	6	7	422	72	4	2	6	24	545
1948	...	1	9	13	613	116	8	4	8	41	813
1949	..	3	4	12	827	131	16	5	13	55	1,066
1950	3	8	17	20	967	186	16	9	16	61	1,303
1951	5	3	12	24	1,022	227	15	13	14	64	1,399
1952	9	—	17	14	1,167	220	13	8	13	48	1,509
1953	4	1	9	16	1,221	255	27	19	33	72	1,657
Proposals—[1]											
1950	—	—	—	2	66	7	1	—	—	3	79
1951	—	—	1	3	160	8	—	—	—	4	176
1952	—	—	—	1	172	15	—	—	—	3	191
1953	—	—	—	—	158	9	2	—	1	1	171

[1] *See* text above.

Wage-earner failures have been shown separately since 1949 and are given, by area, in Table 3.

3.—Wage-Earner Failures, by Area, 1949-53

Year	Atlantic Provinces	Quebec	Ontario	Prairie Provinces	British Columbia	Total
	No.	No.	No.	No.	No.	No.
1949	2	118	2	—	2	124
1950	—	121	9	—	2	132
1951	2	148	11	—	2	163
1952	—	155	8	—	2	165
1953	—	154	9	—	1	164

4.—Bankruptcies and Insolvencies under Federal Legislation, by Branch of Business, 1944-53.

Note.—Figures from 1924 are given in the corresponding table of previous Year Books beginning with the 1942 edition.

Year	Trade	Manufacturing	Agriculture	Logging and Fishing	Mining	Construction	Transportation and Public Utilities	Finance	Service	Not Classified	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
1944	83	47	4	2	3	27	11	7	62	31	277
1945	58	54	2	—	3	39	12	6	70	28	272
1946	77	57	2	4	3	32	14	7	64	18	278
1947	153	152	6	7	—	57	20	5	92	53	545
1948	289	188	9	4	3	77	30	4	144	65	813
1949	374	232	8	10	10	94	46	19	203	70	1,066
1950[1]	502	257	24	7	5	97	40	20	273	78	1,303
1951	570	269	20	8	8	126	42	27	255	74	1,399
1952	569	305	42	2	7	114	45	32	279	114	1,509
1953	650	359	37	6	10	124	52	30	286	103	1,657

[1] Newfoundland included from 1950.

5.—Estimated Assets and Liabilities of Bankruptcies and Insolvencies, 1944-53

Note.—Figures from 1923 are given in the corresponding table of previous Year Books beginning with the 1942 edition.

Year	Estimated Total Assets	Estimated Total Liabilities	Year	Estimated Total Assets	Estimated Total Liabilities
	$	$		$	$
1944	2,020,302	4,043,864	1949	15,548,598	21,355,669
1945	1,864,359	3,995,109	1950[1]	17,168,883	24,872,927
1946	4,039,339	5,966,153	1951	18,237,768	25,912,004
1947	5,933,211	10,077,557	1952	20,381,304	29,658,281
1948	9,855,789	15,723,615	1953	25,899,349	32,817,970

[1] Newfoundland included from 1950.

6.—Bankruptcies and Insolvencies, by Industries and Economic Areas, 1952 and 1953

Industry	1952						1953					
	Atlantic Provinces	Que.	Ont.	Prairie Provinces	B.C.	Total	Atlantic Provinces	Que.	Ont.	Prairie Provinces	B.C.	Total
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Trade—												
General stores	6	40	5	1	1	53	6	44	7	2	3	62
Grocery	4	38	13	1	—	56	—	46	13	1	1	61
Confectionery	—	27	1	—	—	28	—	19	2	—	—	21
Drink and tobacco	—	18	2	—	—	20	—	11	1	—	—	12
Fish and meat	2	31	5	—	—	38	—	31	7	1	4	43
Boots and shoes	—	19	2	1	—	22	—	14	3	—	—	17
Dry goods	—	25	2	—	—	27	3	28	1	—	—	32
Clothing	3	47	11	4	1	66	2	50	19	2	13	86
Furniture	1	20	2	1	—	24	—	25	3	2	—	30
Books and stationery	—	16	1	—	—	17	—	16	1	—	—	17
Automobile	1	17	5	1	2	26	1	18	6	5	—	30
Hardware	—	12	5	—	—	17	—	14	5	1	—	20
Electrical apparatus	—	27	3	1	—	31	—	26	18	3	3	50
Jewellery	1	14	8	—	1	24	—	22	11	1	2	36
Coal and wood	—	13	2	—	—	15	—	14	1	—	—	15
Drugs and chemicals	—	11	1	—	2	14	—	16	1	2	2	21
Miscellaneous	4	54	25	3	5	91	3	57	21	9	7	97
Totals, Trade	**22**	**429**	**93**	**13**	**12**	**569**	**15**	**451**	**120**	**29**	**35**	**650**
Manufacturing—												
Vegetable foods	1	27	1	2	—	31	2	31	7	1	—	41
Drink and tobacco	—	2	—	—	—	2	—	1	—	—	—	1
Animal foods	—	16	2	—	—	18	—	21	—	1	—	22
Fur and leather	—	21	1	2	—	24	—	20	6	2	1	29
Pulp and paper	1	18	5	—	—	24	—	12	—	—	—	12
Textiles	—	29	1	—	—	30	—	52	4	—	—	56
Clothing	—	39	7	2	1	49	—	40	7	2	1	50
Lumber and manufactures	1	31	5	—	—	37	2	32	4	2	5	45
Iron and steel	—	14	2	—	1	17	—	10	6	1	1	18
Non-ferrous metals	—	7	3	1	—	11	—	9	2	1	2	14
Non-metallic minerals	—	8	1	—	—	9	—	9	2	—	—	11
Drugs and chemicals	—	8	1	—	—	9	—	5	1	—	—	6
Miscellaneous	—	36	8	—	—	44	—	44	5	5	—	54
Totals, Manufacturing	**3**	**256**	**37**	**7**	**2**	**305**	**4**	**286**	**44**	**15**	**10**	**359**
Service—												
Garages	2	36	5	5	4	52	1	39	8	1	2	51
Other custom and repairs	—	41	6	—	1	48	1	38	7	1	2	49
Personal service	—	48	7	—	3	58	1	41	2	—	1	45
Restaurants	1	43	7	2	2	55	3	43	4	1	3	54
Professional service	—	23	—	—	—	23	—	29	7	2	—	38
Recreational	1	14	3	—	—	18	—	19	2	—	1	22
Business service	—	23	2	—	—	25	—	21	3	3	—	27
Totals, Service	**4**	**228**	**30**	**7**	**10**	**279**	**6**	**230**	**33**	**8**	**9**	**286**
Other—												
Agriculture	—	40	2	—	—	42	—	31	5	1	—	37
Mining	1	4	1	—	1	7	—	5	1	1	3	10
Logging, fishing and trapping	—	1	—	—	1	2	—	4	—	—	2	6
Construction	5	70	29	5	5	114	2	84	29	3	6	124
Transportation and public utilities	—	29	10	2	4	45	—	36	8	5	3	52
Finance	—	26	3	—	3	32	—	26	—	3	1	30
Totals, Other	**6**	**170**	**45**	**7**	**14**	**242**	**2**	**186**	**43**	**13**	**15**	**259**
Not classified	5	84	15	—	10	114	3	68	15	14	3	103
Grand Totals	**40**	**1,167**	**220**	**34**	**48**	**1,509**	**30**	**1,221**	**255**	**79**	**72**	**1,657**

Section 3.—Statistics of Industrial and Commercial Failures from Private Sources

A table on commercial failures for Canada, by class, for the years 1915 to 1935 (and for Newfoundland for the years 1915-32), is given in the 1936 Year Book, p. 969. In 1936, Dun and Bradstreet, Incorporated, from whose reports these figures were taken, adopted a new method of classification. The principal changes consisted of setting up a new group of construction enterprises, previously included in manufacturing, and a new class for commercial service. Real estate companies, holding and other financial companies, and agents of various kinds were omitted. These changes had the effect of confining the failure records more to industrial and commercial lines of activity, and liabilities were reduced more in proportion to the number of failures, since the companies eliminated usually ran high in indebtedness. This series extends back to 1934.

7.—Industrial and Commercial Failures, by Class, 1948-52, and by Province, 1953

(Source: Dun and Bradstreet, Incorporated)

NOTE.—Figures from 1934 are given in the corresponding table of previous Year Books beginning with the 1946 edition.

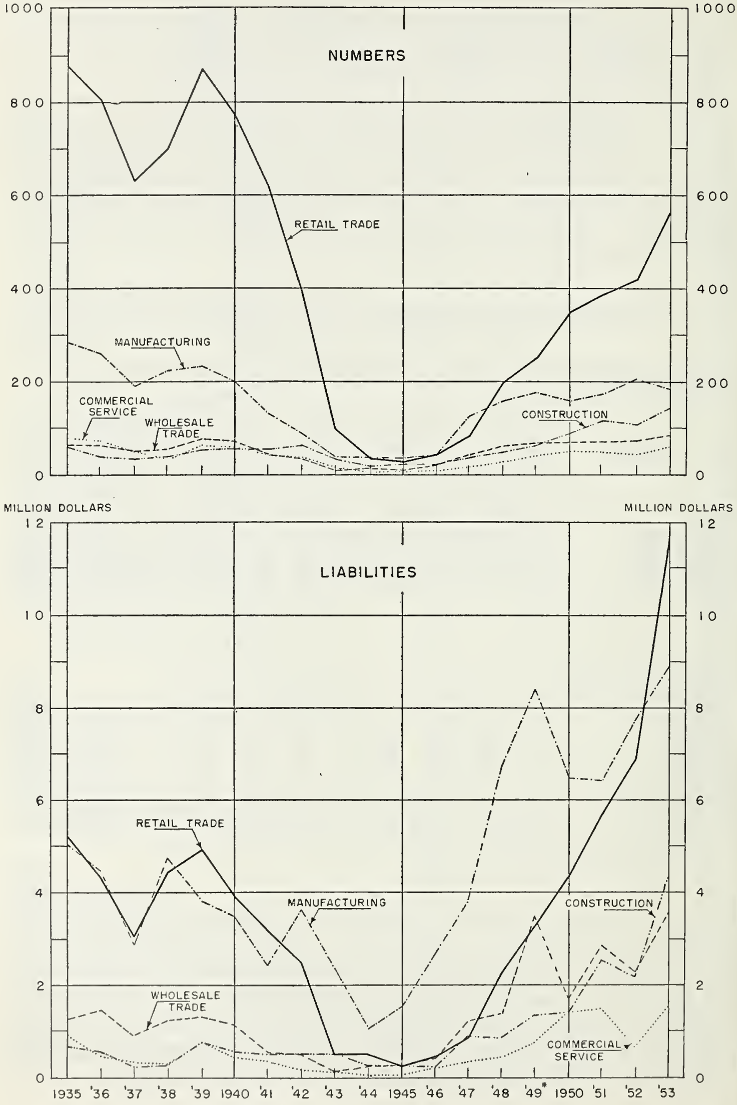
Year and Province	Manufacturing		Wholesale Trade		Retail Trade		Construction		Commercial Service		Totals	
	No.	Liabilities	No.	Liabilities	No.	Liabilities	No.	Liabilities	No.	Liabilities	No.	Liabilities
		$'000		$'000		$'000		$'000		$'000		$'000
Totals, 1948	**158**	**6,734**	**62**	**1,395**	**198**	**2,278**	**48**	**899**	**27**	**449**	**493**	**11,755**
Totals, 1949[1]	**177**	**8,406**	**69**	**3,516**	**247**	**3,252**	**63**	**1,329**	**40**	**776**	**596**	**17,279**
Totals, 1950	**159**	**6,479**	**70**	**1,746**	**349**	**4,347**	**89**	**1,415**	**50**	**1,405**	**717**	**15,392**
Totals, 1951	**174**	**6,409**	**72**	**2,892**	**387**	**5,693**	**116**	**2,560**	**48**	**1,494**	**797**	**19,048**
Totals, 1952	**205**	**7,787**	**73**	**2,285**	**418**	**6,885**	**106**	**2,196**	**41**	**670**	**843**	**19,823**
1953												
Newfoundland	—	—	2	23	9	210	—	—	—	—	11	233
Prince Edward Island	—	—	—	—	1	20	—	—	—	—	1	20
Nova Scotia	2	117	—	—	2	155	1	52	—	—	5	324
New Brunswick	—	—	—	—	13	251	—	—	—	—	13	251
Quebec	107	4,393	59	2,343	325	5,923	83	1,835	41	570	615	15,064
Ontario	47	2,438	15	916	123	2,919	41	1,396	13	795	239	8,464
Manitoba	11	598	4	106	22	575	5	115	3	92	45	1,486
Saskatchewan	1	33	1	12	9	241	—	—	—	—	11	286
Alberta	1	558	3	192	14	303	6	401	1	41	25	1,495
British Columbia	16	806	1	13	50	1,182	6	678	1	2	74	2,681
Totals, 1953	**185**	**8,943**	**85**	**3,605**	**568**	**11,779**	**142**	**4,477**	**59**	**1,500**	**1,039**	**30,304**

[1] Newfoundland included from Apr. 1, 1949.

In 1953, Quebec accounted for 59 p.c. of the total failures and 50 p.c. of the liabilities; Ontario had 23 p.c. of the failures and 28 p.c. of the liabilities.

According to Dun and Bradstreet, Incorporated, commercial failures during World War II decreased steadily year by year and failures in the retail trade group, in which the majority of failures took place before the War, also decreased. After the end of the War, however, the total number of failures increased again. Failures in the retail trade group in 1953 accounted for over one-half of the total.

INDUSTRIAL AND COMMERCIAL FAILURES, BY CLASS
1935–53



*Newfoundland included from April 1949

8.—Industrial and Commercial Failures, by Industrial Group, 1951-53

(Source: Dun and Bradstreet, Incorporated)

Note.—Comparable figures from 1934 are given in the corresponding table of previous Year Books.

Industrial Group	Failures			Liabilities		
	1951	1952	1953	1951	1952	1953
	No.	No.	No.	$'000	$'000	$'000
Manufacturing—						
Foods	15	21	12	317	863	705
Textiles	60	60	62	1,338	2,459	2,810
Forest products	41	40	42	2,324	1,728	1,327
Paper, printing and publishing	11	12	7	350	484	147
Chemicals and drugs	4	6	3	54	185	254
Fuels	—	—	2	—	—	586
Leather and leather products	5	12	5	230	436	94
Stone, clay, glass and products	5	7	2	41	304	35
Iron and steel	7	4	7	279	92	1,132
Machinery	7	13	8	631	299	445
Transportation equipment	1	2	2	329	100	262
All other	18	28	33	516	837	1,146
Totals, Manufacturing	**174**	**205**	**185**	**6,409**	**7,787**	**8,943**
Wholesale Trade—						
Farm products, foods, groceries	19	22	19	366	477	616
Clothing and furnishings	6	3	4	60	253	125
Dry goods and textiles	—	8	13	—	139	929
Lumber, building materials, hardware	6	7	10	201	286	609
Chemicals and drugs	3	3	5	101	15	216
Fuels	1	—	—	129	—	—
Automotive products	3	2	3	75	17	66
All other	34	28	31	1,960	1,098	1,044
Totals, Wholesale Trade	**72**	**73**	**85**	**2,892**	**2,285**	**3,605**
Retail Trade—						
Foods	98	102	117	1,155	1,233	1,419
Farm supplies, general stores	17	16	30	404	200	634
General merchandise	17	23	25	470	212	446
Apparel	54	60	78	653	880	1,442
Furniture, household furniture	39	36	64	745	854	2,716
Lumber, building materials, hardware	27	24	35	529	558	573
Automotive products	40	58	85	815	1,720	3,287
Restaurants	53	55	71	440	534	604
Drugs	3	8	7	59	172	83
All other	39	36	56	423	522	575
Totals, Retail Trade	**387**	**418**	**568**	**5,693**	**6,885**	**11,779**
Construction—						
General contractors	44	49	59	1,039	1,267	2,028
Carpenters and builders	9	9	7	147	56	166
Building sub-contractors	59	46	74	1,267	841	1,931
Other contractors	4	2	2	107	32	352
Totals, Construction	**116**	**106**	**142**	**2,560**	**2,196**	**4,477**
Commercial Service—						
Cleaners and dyers, tailors	7	5	7	40	60	51
Haulage, buses, taxis, etc.	15	14	13	428	213	322
Hotels	9	7	6	563	146	92
Laundries	3	2	2	113	146	8
Undertakers	2	—	3	18	—	564
All other	12	13	28	332	105	463
Totals, Commercial Service	**48**	**41**	**59**	**1,494**	**670**	**1,500**
Grand Totals	**797**	**843**	**1,039**	**19,048**	**19,823**	**30,304**

CHAPTER XXII.—FOREIGN TRADE

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

The subject of foreign trade covers more than the treatment of imports and exports of commodities, important though this is. In its broader sense, foreign trade is made up of the total international exchanges of goods, services, securities and other financial exchanges, all of which are presented in their proper relationship in this Chapter. Following Part I, which is a review of Canada's trade during the period 1951-53, Part II gives detailed statistics of external commodity trade. Part III summarizes external transactions from the standpoint of the balance of international payments. Part IV outlines the various ways in which the Federal Government promotes and encourages trade relationships, and contains a brief review of the Canadian tariff structure.

PART I.—REVIEW OF FOREIGN TRADE*

The *value* of world trade, expressed in United States dollars, reached a post-war peak in 1951 when it totalled $158,600,000,000. Falling prices together with some reduction in the quantity of goods traded reduced this value by 3 p.c. in 1952, and in 1953 there was a further decline of 2 p.c. However, the *volume* of world trade turned upwards in 1953, the entire reduction in value in that year resulting from lower average prices than had prevailed in 1952. The actual volume of trade in 1953 was probably above the 1951 level.

Canada ranked fourth in world trade in 1951 but regained third place in 1952, her exports and imports in 1952 and 1953 being exceeded only by those of the United States and the United Kingdom. The United States increased the value of both exports and imports in 1953, and accounted for 18 p.c. of the trade of the non-communist world. However, the increase in the value of United States exports was caused entirely by sharply higher shipments under that country's mutual security program; the value of the commercial trade of the United States declined in 1953. The trade of the United Kingdom declined moderately in value in 1953, a decline accounted for entirely by lower average prices; the volume of both exports and imports increased. Western Germany increased its exports substantially in both 1952 and 1953, and in 1953 rose to fourth place among the leading trading nations. German sales of manufactured goods in foreign markets are becoming increasingly important.

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* Prepared in the External Trade Section, International Trade Division, Dominion Bureau of Statistics.

The increase in Canadian trade in the period 1951-53, both in value and volume, was considerably more rapid than was that of most other countries. Canada's share in the trade of the non-communist world advanced from 5·2 p.c. in 1951 to 6·0 p.c. in 1952, and to 6·3 p.c. in 1953. Canada ranked third in trade per capita among the world's important trading countries in 1951, advanced to second place in 1952 when the trade of Hong Kong was sharply reduced by adverse political conditions and, in 1953, for the first time in the post-war period, gained first place after New Zealand's control program sharply reduced that country's imports.

1.—World Trade, by Leading Countries, 1952 and 1953

Sources: International Monetary Fund, *International Financial Statistics*, September 1954, and United Nations Statistical Office, *Population and Vital Statistics Reports*, Vol. VI, Nos. 2, 3.

Country	1952 Total Trade	1953 Exports f.o.b.	1953 Imports c.i.f.	1953 Total Trade	Population mid-1953	Trade per Capita 1952	Trade per Capita 1953
	U.S. $'000,000	U.S. $'000,000	U.S. $'000,000	U.S. $'000,000	'000	U.S. $	U.S. $
United States	26,803	15,773	11,837	27,610	162,654	168	170
United Kingdom	17,377	7,524	9,366	16,890	50,914	342	332
Canada	**9,239**	**4,616**	**4,842**	**9,458**	**14,781**	**640**	**640**
Western Germany	7,808	4,389	3,771	8,160	51,298	154	159
France	8,237	3,788	4,007	7,795	43,801	191	178
Belgium and Luxembourg	4,850	2,251	2,405	4,656	9,061	538	514
Netherlands	4,381	2,152	2,382	4,534	10,478	422	433
Italy	3,697	1,488	2,395	3,883	47,015	79	83
Japan	3,301	1,275	2,410	3,685	86,700	39	43
Australia	3,669	1,980	1,487	3,467	8,829	425	393
Sweden	3,292	1,477	1,579	3,056	7,172	462	426
Brazil	3,419	1,488	1,299	2,787	55,772	63	50
World Total[1]	**153,962**	**74,778**	**76,143**	**150,921**	..	**91**	..

[1] Excludes China, the Union of Soviet Socialist Republics, and the communist countries of Eastern Europe (except Yugoslavia).

Canadian Trade, 1951-53.—Canadian trade, like world trade, was very large in the period 1951-53. The volume of imports showed especially pronounced gains in these years under the influence of record levels of investment and consumption, of a rapidly growing population and of a large defence program. Import volume increased by 12 p.c. from 1950 to 1951, by a further 13 p.c. in 1952, and by almost another 10 p.c. in 1953. Volume of exports increased by 11 p.c. in 1951 over 1950 and a further 11 p.c. in 1952; but in 1953 the volume of exports was about 1 p.c. lower than in 1952. Supply limitations were important in preventing Canadian exports from increasing as rapidly as Canadian imports in this period. Canadian imports account for a relatively small part of total world production of most important commodities and, therefore, a very sharp increase in Canadian import requirements can usually be satisfied in the markets of the world without necessitating much change in world production. Foreign sales, however, account for a large proportion of total Canadian production of most of the important export commodities, and to permit a major increase in exports a considerable increase in productive capacity is necessary, if existing capacity is already fully employed. Expansion of capacity is often a slow process, requiring much investment and development work. While a large part of the investment in Canada in recent years will eventually increase export capacity (or reduce import requirements), many major projects had not reached the production stage by 1953.

Grain is among the few important exports of which supplies can be rapidly increased in the short run, weather permitting. The Canadian harvest was exceptional in each year from 1951 to 1953, while 1951 was a year of poor harvests in many important overseas countries. Foreign demand for Canadian grain was therefore very strong in 1951, 1952 and much of 1953. Exports of wheat, barley, oats and rye accounted for about 55 p.c. of the increase in total export volume in 1951 and 72 p.c. of the further increase in 1952. The easing of grain exports in the latter part of 1953, after foreign harvests had improved and grain stocks had been rebuilt, was also the principal cause of the slight decline in export volume in that year.

Most of Canada's important imports increased substantially from 1950 to 1953 but the increase was especially pronounced in the case of investment goods and consumer durables. Imports of business and industrial machinery were 80 p.c. greater in value in 1953 than in 1950 and those of electrical apparatus 140 p.c. greater. Purchases of refrigerators and freezers from foreign countries were 261 p.c. greater than in 1950, those of cooking and heating apparatus 125 p.c. greater and those of household machinery 44 p.c. greater. Thus it appears that the value of imports of investment goods and consumer durable goods increased about twice as rapidly as that of imports in general.

Fuels are among the few items to show no increase in import volume in these years. Oil produced in Canada displaced imported petroleum in an increasing part of the Canadian market, and oil also, to an increasing extent, displaced coal in many domestic and industrial uses. These trends were responsible for a gradual decline in Canadian imports of coal and petroleum.

Trade Balance Changes.—The period 1951-53 was marked by very sharp swings in Canada's trade balance. A small import balance appeared on commodity trade in 1950 for the first time since the end of World War II and grew to $121,500,000 in 1951. Especially important in creating this balance was the rapid deterioration in the terms of trade following the outbreak of the Korean war, although the more rapid growth of import than export volume was already important. In the latter part of 1951, the terms of trade improved as import prices fell while export prices continued to rise, and throughout the first half of 1952 the fall in import prices was more rapid than that in export prices. This change in relative prices was sufficient to far outweigh the continued greater growth in import volume than in export volume, and resulted in a large export balance of $325,500,000 on trade in 1952.

After the middle of 1952, import prices recovered moderately and export prices continued a slow decline. About the same time the growth in export volume ceased, while that in import volume continued almost unabated. The result of these developments was the reappearance of a large import balance on commodity trade, amounting to $210,200,000 in 1953. The swing in the trade balance from 1952 to 1953 ($535,700,000) was greater than has occurred between any other two peacetime years.

Despite the rapid changes in the merchandise trade balance in 1952-53, the Canadian dollar stood at a premium over the United States dollar after February 1952. Other factors in the balance of payments, notably the continued large inflow of investment capital to Canada (chiefly from the United States), offset the trade deficit and kept the Canadian dollar strong. In 1952-53, the Canadian dollar was at a premium over the United States dollar for longer than at any previous time in this century.

2.—Price of the United States Dollar in Canada, by Month, 1947-53

NOTE.—Rates published by Bank of Canada. To Oct. 1, 1950, average, for business days in period, of mid-rate between official buying and selling rates; from Oct. 2, 1950, noon average market rate for business days in period.

(Canadian cents per U.S. dollar)

Month	1947	1948	1949	1950	1951	1952	1953
January	100·25	100·25	100·25	110·25	105·17	100·48	97·05
February	100·25	100·25	100·25	110·25	104·92	100·10	97·73
March	100·25	100·25	100·25	110·25	104·73	99·59	98·33
April	100·25	100·25	100·25	110·25	105·99	98·09	98·37
May	100·25	100·25	100·25	110·25	106·37	98·38	99·41
June	100·25	100·25	100·25	110·25	106·94	97·92	99·44
July	100·25	100·25	100·25	110·25	106·05	96·91	99·18
August	100·25	100·25	100·25	110·25	105·56	96·11	98·83
September	100·25	100·25	104·75	110·25	105·56	95·98	98·43
October	100·25	100·25	110·25	105·34	105·08	96·43	98·25
November	100·25	100·25	110·25	104·03	104·35	97·66	97·77
December	100·25	100·25	110·25	105·31	102·56	97·06	97·31
Annual Average	**100·25**	**100·25**	**103·08**	**108·92**	**105·28**	**97·89**	**98·34**

Direction of Trade.—Important changes in the direction of trade accompanied the large increase in trade volume in 1951-53. In 1951 and 1952, these changes tended to increase the size of the trade balances incurred with many individual countries. In 1953, they tended generally to reduce the size of individual trade balances.

Overseas countries sharply increased their share of Canada's exports in 1951 and 1952. The principal markets for Canadian grains are overseas and grains played the chief part in the growth of exports in these years. In addition, many overseas countries sharply increased their purchases of Canadian industrial materials in this period and also of some manufactured goods, notably motor-vehicles and electrical apparatus. At the same time, Canadian imports from most overseas countries either contracted somewhat in volume or showed insufficient increase in volume to offset the severe declines in the prices of many overseas goods from the peaks of early 1951.

These conditions began to change about the middle of 1952. The trade restrictions imposed by many sterling-area countries during the first half of 1952 to protect their exchange reserves began to affect exports, and the important Brazilian market for exports was also seriously limited by exchange problems. Overseas demand for some industrial materials, notably wood pulp, lumber, copper and zinc, was reduced, and supplies from other sources were more readily available.

Prospects of a second good harvest in 1953 in certain overseas countries led to further reductions in Canada's overseas exports in the latter part of the year. While most of the over-all decline in overseas exports was offset by increased sales to the United States, some commodities, notably motor-vehicles, could not compete in that market and others, especially farm implements, found even the United States market shrinking in 1953.

A major portion of the increase in Canada's imports from 1951 to 1953 was drawn from the United States. Many of the goods required by Canada's investment program could most readily be obtained in that market, and also the requirements of defence policy led to a major part of Canada's defence imports being procured in the United States.

In the latter part of 1951 and the early part of 1952 there was some reduction in Canadian demand for many overseas goods, especially textiles and some raw materials. Imports of these had been extremely heavy in the preceding year, but fell off as inventories in Canada were reduced. In addition, rapidly falling prices of many commodities further reduced the value of imports from overseas countries. In the latter part of 1952, prices stabilized and demand recovered, so that imports from most overseas areas in 1953 were considerably greater in volume than in 1952.

3.—Percentage Distribution of Trade, by Leading Countries and Trading Areas, 1951-53

Item and Year	United States	United Kingdom	Europe	Commonwealth and Ireland	Latin America	Others
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Total Exports—						
1951	58·9	16·0	8·7	6·7	5·3	4·4
1952	53·9	17·3	10·9	6·6	6·3	5·0
1953	59·0	16·0	8·9	6·0	4·8	5·3
Imports—						
1951	68·9	10·3	4·3	7·5	6·7	2·3
1952	73·9	8·9	3·8	4·6	7·0	1·8
1953	73·5	10·3	3·9	4·0	6·6	1·7
Total Trade—						
1951	64·0	13·1	6·5	7·1	6·0	3·3
1952	63·5	13·2	7·5	5·6	6·7	3·5
1953	66·4	13·1	6·4	4·9	5·7	3·5

Seasonal Pattern of Canadian Trade.*—Seasonal factors exert a considerable influence on Canada's trade and complicate the analysis of that trade over short periods. When trade statistics aggregates are studied, a major concern of the observer is normally to discover whether exports or imports are rising or falling, but for periods shorter than one year it is often difficult to answer this type of question with certainty. What appears to be a change in trend may well be no more than a fluctuation related to change in the time of year, rather than to any change in economic considerations.

Among the factors chiefly responsible for the seasonal variations in Canada's trade are the importance of agricultural commodities in trade, the importance of cheap water transportation which is available for only part of the year, and special demands for certain commodities (and by some industries such as the construction industry) at certain times of the year.

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* For a more detailed discussion of this problem *see Review of Foreign Trade, First Half Year 1953, DBS 1953.*

Exports tend to be especially low in the first quarter when the St. Lawrence-Great Lakes waterway is closed and the movement of heavy and bulky goods is restricted. In the second quarter they rise slightly above the quarterly average, as stocks of heavy goods which have built up at Canadian ports in the winter months are cleared, then in the third quarter they tend to subside again to somewhat less than the quarterly average. In the fourth quarter, exports are especially heavy as the new grain crop moves into commercial channels, and foreign consumers build stocks of those goods that are more expensive to move in the winter months.

Imports, like exports, tend to be low in the first quarter owing chiefly to the winter ebb in economic activity in Canada. They rise sharply in the second quarter, when demand reaches its peak and transportation difficulties are less. Imports tend to fall off in the third quarter and again increase in the fourth, but the lesser importance of heavy and bulky goods in imports than in exports keeps their fourth-quarter peak well below that for exports.

The differences in the seasonal pattern of exports and imports tend to produce a strong seasonal fluctuation in the trade balance, which should not be overlooked in interpreting monthly and quarterly trade values. If exports and imports were running evenly at an annual rate of $4,000,000,000 each, then seasonal influences would account for a trade deficit of $38,000,000 in the first quarter and $65,000,000 in the second quarter and at the end of July the cumulative deficit would reach a peak of about $107,000,000. The third quarter would show a net export balance of $10,000,000 and the fourth quarter one of $93,000,000. Although the year's trade would be in balance, every cumulative period until the year end would show an apparent import surplus. Only rarely do the export and import totals approach a balance on an annual basis but a knowledge of the seasonal trend of the trade balance assists greatly in evaluating its significance for any given short period.

4.—Post-war Seasonal Patterns of Change (Percentage of Quarterly or Monthly Average) in Export and Import Value, Price[1] and Volume

Period	Value		Price[1]		Volume	
	Domestic Exports	Imports	Domestic Exports	Imports	Domestic Exports	Imports
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
First Quarter	89·9	93·7	100·5	100·7	89·4	92·8
Second Quarter	100·8	107·3	100·0	101·0	100·9	106·2
Third Quarter	98·7	97·7	99·5	98·7	99·2	99·0
Fourth Quarter	110·6	101·3	100·0	99·6	110·5	102·0
Average	**100·0**	**100·0**	**100·0**	**100·0**	**100·0**	**190·0**
January	94·2	95·6	100·5	100·5	93·5	94·8
February	81·9	85·5	100·8	100·7	81·1	84·4
March	93·6	100·0	100·3	100·9	93·5	99·3
April	91·1	105·0	100·5	101·5	90·4	103·7
May	109·1	111·7	99·8	101·1	109·7	110·2
June	102·2	105·2	99·9	100·3	102·8	104·6
July	100·3	101·4	99·6	99·0	101·1	102·8
August	99·7	95·1	99·3	98·6	99·7	96·4
September	96·3	96·5	99·4	98·5	96·7	97·8
October	109·4	106·9	99·7	99·0	109·6	108·3
November	111·9	105·0	100·1	99·3	111·1	105·4
December	110·3	92·1	100·1	100·6	110·8	92·3

[1] The variability among observations for the same month of different years is sufficient to make doubtful the hypothesis that seasonal variation in price exists.

PART II.—FOREIGN TRADE STATISTICS*

Section 1.—Explanations *re* Canadian Trade Statistics

Certain problems of procedure arise in recording trade statistics and require explanation. For the correct interpretation of the statistics of foreign trade, it is necessary that the following definitions and explanations of terms used be kept in mind:—

Quantities and Values.—In all tables of imports and exports, the quantities and values are based upon the declarations of importers (import entries) and exporters (export entries), as subsequently checked by customs officials.

Imports: Valuation.—"Imports" means imports entered for consumption. "Entered for consumption" does not necessarily imply that the goods have been actually consumed in Canada, but that they have passed into the possession of the importer and that duty has been paid on that portion liable for duty.

Under the main provisions of the law, the value of merchandise imported into Canada is the fair market value or price thereof when sold for home consumption in the principal markets of the country from which said merchandise was exported. (*See* Sects. 35 to 45 and 55 of the Customs Act.)

Canadian Exports: Valuation.—"Canadian produce" exported includes Canadian products or manufactures, also exports of commodities of foreign origin that have been changed in form or enhanced in value by further manufacture in Canada, such as sugar refined in Canada from imported raw sugar, aluminum extracted from imported ore, and articles constructed or manufactured from imported materials. The value of exports of Canadian merchandise is the actual amount received in Canadian dollars exclusive of freight, insurance and other handling charges.

Foreign Exports: Valuation.—"Foreign produce" exported consists of foreign merchandise that has previously been imported (entered for home consumption). The value of such commodities is the actual amount received in Canadian dollars exclusive of freight, insurance and other handling charges.

Countries to which Trade is Credited.—Imports are classified as received from the countries whence they were consigned to Canada. These countries are not necessarily the countries of actual origin of the goods, since goods produced in one country may be imported by a firm in another country and later re-sold to Canada. In such cases, the second country would be the country of consignment to which the goods would be credited.

There is one exception to this rule. An attempt is made to classify by country of actual origin all imports produced in Central and South America. The effect of this procedure, which has been in force since 1946, is to reduce slightly imports credited to the United States and to increase those credited to Central and South American countries.

Exports are always credited to the country to which they are consigned.

Discrepancies in Trade Statistics between Canada and Other Countries.—Canadian statistics of exports are rarely in exact agreement with the import statistics of its customers and parallel differences occur with Canadian imports. Among the chief factors contributing to these discrepancies are:—

(1) Differences in the system of valuation used by Canada and those of other countries, especially with respect to the treatment of transportation charges.

(2) Differences in the statistical treatment of special categories of trade, such as armaments and military supplies, government-financed gift or mutual-aid shipments, postal and express shipments, or warehouse trade.

(3) Differing definitions of territorial areas.

(4) Differing systems of geographical classification of trade, notably the consignment system used by Canada and the actual origin or ultimate destination system in use by some other countries.

(5) Differences in the time at which trade is recorded in the statistics of partner countries caused by the time required for goods to move from one country to another.

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* Based on statistics taken from reports published by the External Trade Section, International Trade Division, Dominion Bureau of Statistics.

Treatment of Gold in Trade Statistics.—The general use of gold as a money metal gives it peculiar attributes that distinguish it from other commodities in trade. In particular, international movements of gold are determined largely by monetary factors rather than by ordinary trade or commercial considerations. Gold is generally acceptable; it does not have to surmount tariff barriers and is normally assured a market at a fixed minimum price. Also, gold may be bought or sold internationally without any physical movements of the metal, such transactions being recognized by simply setting aside or 'ear-marking' the metal in the vaults of some central bank.

For these reasons, movements of gold in a primary or semi-fabricated state are excluded from the statistics of Canada's commodity trade. However, as gold is produced in Canada primarily as an export commodity, a series showing new gold production available for export is published as a supplement to the trade statistics. Because this series is calculated on a production basis, a division of the figures into transactions with individual countries is not possible.

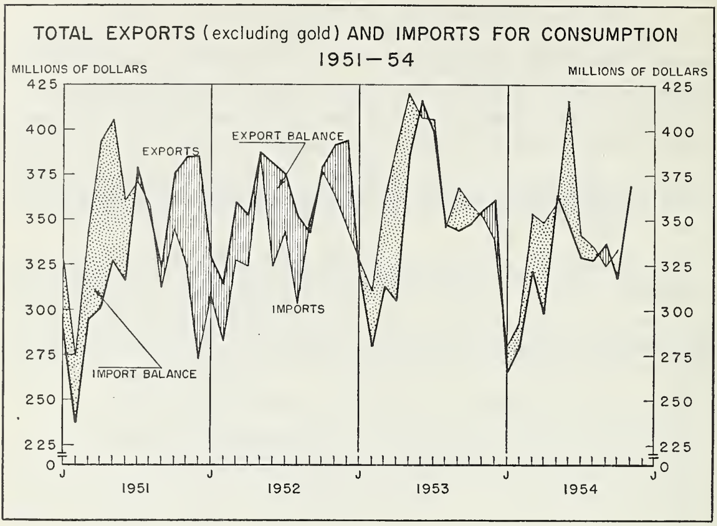
NEW GOLD PRODUCTION AVAILABLE FOR EXPORT (NET EXPORTS OF NON-MONETARY GOLD), BY MONTH, 1946-53

(Millions of dollars)

Month	1946	1947	1948	1949	1950	1951	1952	1953
January..........	9·3	9·0	9·6	9·7	15·8	17·3	13·3	16·0
February.........	9·5	6·9	8·9	9·6	11·7	11·7	13·0	16·1
March............	10·0	6·8	8·7	12·1	13·5	8·4	15·0	15·6
April............	7·2	6·4	9·5	9·8	11·4	16·2	11·2	11·7
May..............	10·0	8·2	8·8	12·4	15·8	13·0	8·5	12·0
June.............	7·7	8·6	9·6	9·8	15·0	13·8	14·6	13·7
July.............	6·6	10·1	10·8	9·4	14·8	13·4	14·9	9·3
August...........	7·5	7·5	9·7	13·8	13·8	11·0	9·6	10·7
September........	6·8	8·4	11·9	11·2	10·8	10·8	12·8	10·4
October..........	8·5	9·2	9·6	13·2	16·4	8·2	10·1	9·9
November........	6·0	7·2	9·1	15·4	12·3	7·7	13·6	9·1
December........	6·7	11·0	12·8	12·5	11·3	18·3	13·5	9·8
TOTALS..........	95·8	99·3	119·0	138·9	162·6	149·8	150·1	144·3

Section 2.—Total Foreign Trade

In considering the figures in Sections 2 to 6, reference should be made to the explanatory notes on trade in Section 1. It must be emphasized that gold imports and exports are excluded from all tables.



TOTAL EXPORTS (excluding gold) AND IMPORTS FOR CONSUMPTION 1951—54

1.—Value of Total Foreign Trade of Canada (Excluding Gold), 1939-53

NOTE.—These figures are available on a calendar-year basis only since 1919; figures for 1919-34 are given in the 1950 Year Book, p. 905 and for 1935-38 in the 1954 edition, p. 969. Figures for the years ended Mar. 31, 1868-1939, are given in the 1940 Year Book, p. 526.

Year	Imports			Exports			Balance of Trade: Excess of Exports (+) Imports (−)
	Dutiable	Free	Total	Domestic Produce	Foreign Produce	Total	
	$	$	$	$	$	$	$
1939....	427,470,633	323,584,901	751,055,534	924,926,104	10,995,609	935,921,713	+184,866,179
1940....	582,934,898	499,015,821	1,081,950,719	1,178,954,420	14,263,172	1,193,217,592	+111,266,873
1941....	732,791,033	716,000,617	1,448,791,650	1,621,003,175	19,451,366	1,640,454,541	+191,662,891
1942....	715,018,745	929,223,188	1,644,241,933	2,363,773,296	21,692,750	2,385,466,046	+741,224,113
1943....	836,548,673	898,528,217	1,735,076,890	2,971,475,277	29,877,002	3,001,352,279	+1,266,275,389
1944....	884,751,584	874,146,613	1,758,898,197	3,439,953,165	43,145,447	3,483,098,612	+1,724,200,415
1945....	798,795,201	786,979,941	1,585,775,142	3,218,330,353	49,093,935	3,267,424,288	+1,681,649,146
1946....	1,078,943,972	848,335,430	1,927,279,402	2,312,215,301	26,950,546	2,339,165,847	+411,886,445
1947....	1,562,690,081	1,011,254,044	2,573,944,125	2,774,902,355	36,888,055	2,811,790,410	+237,846,285
1948....	1,382,202,722	1,254,742,630	2,636,945,352	3,075,438,085	34,590,583	3,110,028,668	+473,083,316
1949....	1,444,123,667	1,317,083,574	2,761,207,241	2,992,960,978	29,491,856	3,022,452,834	+261,245,593
1950....	1,617,948,425	1,556,304,713	3,174,253,138	3,118,386,551	38,686,122	3,157,072,673	−17,180,465
1951....	2,174,304,400	1,910,552,078	4,084,856,478	3,914,460,376	48,923,939	3,963,384,315	−121,472,163
1952....	2,162,882,381	1,867,585,272	4,030,467,653	4,301,080,679	54,878,985	4,355,959,664	+325,492,011
1953....	2,417,960,243	1,964,870,187	4,382,830,430	4,117,405,882	55,195,233	4,172,601,115	−210,229,315

Section 3.—Trade by Geographic Areas

The tables in this Section provide information about Canada's total foreign trade by continent and by country, with special reference in Tables **4** to **8** to the distribution of trade among the principal geographic areas.

2.—Trade of Canada, by Continent, 1951-53

Continent	1951		1952		1953	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	$'000		$'000		$'000	
Imports						
Europe—						
United Kingdom	420,984	10·3	359,757	8·9	453,391	10·3
Other Europe	177,944	4·4	151,797	3·8	173,822	4·0
North America—						
United States	2,812,927	68·8	2,976,962	73·9	3,221,214	73·5
Other North America	115,326	2·8	114,813	2·8	92,943	2·1
South America	246,666	6·0	237,073	5·9	252,332	5·7
Asia	195,355	4·8	120,800	3·0	114,079	2·6
Oceania	84,102	2·1	43,114	1·0	42,226	1·0
Africa	31,552	0·8	26,152	0·7	32,823	0·8
Totals, Imports	**4,084,856**	**100·0**	**4,030,468**	**100·0**	**4,382,830**	**100·0**
Exports (Domestic)						
Europe—						
United Kingdom	631,461	16·1	745,845	17·3	665,232	16·2
Other Europe	369,696	9·4	500,345	11·6	387,285	9·4
North America—						
United States	2,297,674	58·7	2,306,955	53·6	2,418,915	58·7
Other North America	123,336	3·2	140,519	3·3	111,627	2·7
South America	140,145	3·6	186,984	4·3	139,393	3·4
Asia	190,374	4·9	254,140	5·9	258,204	6·3
Oceania	78,955	2·0	76,033	1·8	53,716	1·3
Africa	82,819	2·1	90,259	2·2	83,034	2·0
Totals, Exports (Domestic)	**3,914,460**	**100·0**	**4,301,080**	**100·0**	**4,117,406**	**100·0**

3.—Trade of Canada, by Leading Countries, 1951-53

Rank			Country	1951	1952	1953
1951	1952	1953				
				$'000	$'000	$'000
			Imports			
1	1	1	United States	2,812,927	2,976,962	3,221,214
2	2	2	United Kingdom	420,985	359,757	453,391
3	3	3	Venezuela	136,718	135,758	155,147
9[1]	10	4	Western Germany	30,936[1]	22,629	35,507
6	4	5	Brazil	40,627	35,103	35,047

For footnote, *see* end of table.

3.—Trade of Canada, by Leading Countries, 1951-53—concluded

Rank			Country	1951	1952	1953
1951	1952	1953				
				$'000	$'000	$'000
			Imports—concluded			
8	5	6	Belgium and Luxembourg	39,095	33,216	29,082
7	6	7	India	40,217	26,822	26,627
5	12	8	Australia	46,228	18,712	23,464
24	14	9	Colombia	13,063	18,004	23,215
21	15	10	Netherlands	14,010	16,495	22,298
12	11	11	France	23,974	19,117	22,267
4	7	12	Malaya and Singapore	57,980	25,473	21,896
16	16	13	Switzerland	16,398	16,396	20,437
18[2]	17	14	Lebanon	16,381[2]	15,171	19,584
11	9	15	British Guiana	25,025	23,660	17,800
15	8	16	Mexico	18,013	23,937	15,785
17	20	17	Ceylon	16,396	12,492	14,461
20	22	18	Italy	14,217	11,735	14,271
25	19	19	Japan	12,577	13,162	13,629
14	25	20	Jamaica	18,041	9,204	11,761
31	13	21	Cuba	8,333	18,615	11,654
30	26	22	Costa Rica	8,785	8,740	9,472
27	24	23	British East Africa	10,864	9,593	9,393
26	28	24	Sweden	11,808	8,611	9,341
10	18	25	New Zealand	30,107	14,231	8,572
22	36	26	Argentina	13,955	4,374	8,529
28	21	27	Netherlands Antilles	10,809	11,747	8,154
19	23	28	Trinidad and Tobago	15,082	9,660	8,062
[3]	32	29	Dominican Republic	1,126	6,000	5,854
34	31	30	Fiji	5,993	6,487	5,554
			Totals, 30 Leading Countries	**3,930,670**	**3,911,863**	**4,281,468**
			Grand Totals, Imports	**4,084,856**	**4,030,468**	**4,382,830**
			Exports (Domestic)			
1	1	1	United States	2,297,675	2,306,955	2,418,914
2	2	2	United Kingdom	631,461	745,845	665,232
4	4	3	Japan	72,976	102,603	118,568
10[1]	5	4	Western Germany	37,028[1]	94,863	83,858
3	3	5	Belgium and Luxembourg	94,457	104,376	69,510
6	11	6	Union of South Africa	52,736	47,852	50,763
15	12	7	Netherlands	26,191	41,508	42,382
7	9	8	Australia	49,079	49,697	39,629
5	6	9	Brazil	53,684	81,367	37,561
12	14	10	Norway	32,198	39,002	37,278
11	7	11	India	35,737	55,423	37,187
14	15	12	Venezuela	26,982	35,683	36,485
8	8	13	Italy	48,763	52,645	33,170
9	10	14	France	46,538	48,264	32,281
42	24	15	Pakistan	4,486	16,016	32,103
16	16	16	Switzerland	25,345	26,918	29,833
13	13	17	Mexico	29,880	39,641	28,986
22	25	18	Colombia	12,311	13,756	20,146
19	17	19	Cuba	20,424	24,181	16,124
39	22	20	Peru	5,054	16,405	15,108
[3]	[3]	21	Korea	213	335	14,991
[3]	[3]	22	Spain	742	3,579	14,179
20	23	23	Philippines	15,598	16,045	13,872
18	18	24	Ireland	20,921	23,058	13,356
27	30	25	Jamaica	10,213	10,591	12,490
[3]	20	26	Egypt	2,466	19,363	11,688
28	29	27	Trinidad and Tobago	9,950	11,034	9,490
25	27	28	Israel	11,816	11,940	9,049
24	33	29	Hong Kong	12,033	9,582	9,000
30	36	30	Puerto Rico	8,120	7,328	7,753
			Totals, 30 Leading Countries	**3,695,077**	**4,055,855**	**3,960,986**
			Grand Totals, Exports, Domestic	**3,914,460**	**4,301,081**	**4,117,406**

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[1] Includes Eastern Germany.

[2] Includes Syria.

[3] Lower than 30th.

4.—Values and Percentages[1] of Trade with Selected Overseas Countries via the United States, 1952 and 1953

Country	Imports via the United States				Domestic Exports via the United States			
	1952		1953		1952		1953	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Totals, North America	—	—	—	—	**538**	**19·0**	**238**	**9·0**
Central America and Antilles								
British West Indies	108	0·4	236	1·0	1,306	4·1	1,505	4·3
Costa Rica	347	4·0	1,903	20·1	982	37·6	895	40·7
Cuba	107	0·6	1,530	13·1	6,263	25·9	3,363	20·9
Dominican Republic	15	0·3	11	—	1,464	31·5	1,210	30·3
Mexico	681	2·8	5,419	34·3	23,126	58·3	15,901	54·9
Netherlands Antilles	365	3·1	—	—	915	59·4	713	54·5
Panama	40	1·0	817	22·5	1,011	8·9	901	20·6
Totals, Central America and Antilles[2]	**2,064**	**1·8**	**11,706**	**13·0**	**40,459**	**29·4**	**29,199**	**26·8**
South America								
British Guiana	206	0·9	561	3·2	73	1·1	65	1·4
Argentina	90	2·1	843	9·9	7,062	85·8	3,826	50·1
Bolivia	—	—	1	—	795	12·4	372	6·8
Brazil	1,799	5·1	4,017	11·5	41,280	50·7	8,722	23·2
Chile	27	0·8	105	10·0	4,939	48·9	2,943	74·6
Colombia	2,053	11·4	4,474	19·3	5,856	42·6	5,366	26·6
Peru	104	1·3	302	10·3	3,421	20·9	4,048	26·8
Venezuela	57,014	42·0	79,888	51·5	17,829	50·0	13,491	37·0
Totals, South America[2]	**61,438**	**25·9**	**90,918**	**36·0**	**85,712**	**45·8**	**41,015**	**29·4**
Northwestern Europe								
United Kingdom	62	--	198	—	24,406	3·3	32,206	4·8
Belgium and Luxembourg	18	0·1	116	0·4	14,132	13·5	17,232	24·8
France	194	1·0	77	0·3	8,932	18·5	8,912	27·6
Western Germany	256	1·1	165	0·5	8,011	8·4	5,557	6·6
Ireland	71	15·4	—	—	152	0·7	1,333	10·0
Netherlands	52	0·3	6	—	2,454	5·9	4,053	9·6
Norway	4	0·1	—	—	1,151	3·0	866	2·3
Sweden	14	0·2	25	0·3	2,256	18·5	795	17·3
Switzerland	153	0·9	416	2·0	3,005	11·2	5,529	18·5
Totals, Northwestern Europe[2]	**841**	**0·2**	**1,088**	**1·8**	**66,220**	**5·7**	**79,321**	**8·0**
Southern Europe								
Italy	272	2·3	241	1·7	4,481	8·5	7,116	21·4
Portugal	302	16·8	38	1·9	529	13·1	557	14·0
Spain	115	2·7	250	5·4	1,060	29·6	454	3·2
Totals, Southern Europe[2]	**726**	**4·0**	**557**	**2·6**	**9,071**	**13·3**	**9,521**	**16·7**
Totals, Eastern Europe	**166**	**2·2**	**85**	**1·6**	**2,278**	**8·8**	**1,034**	**27·4**
Middle East								
Arabia	2,649	35·0	3	0·1	1,987	92·5	1,148	43·4
Egypt	96	20·8	341	8·1	1,434	7·4	924	7·9
Israel	36	3·1	19	1·4	1,615	13·5	692	7·6
Lebanon and Syria	7,662	50·4	12,853	65·4	2,659	24·6	1,603	27·9
Totals, Middle East[2]	**11,419**	**38·9**	**13,504**	**44·0**	**12,361**	**24·6**	**6,975**	**21·0**

For footnotes, *see* end of table.

4.—Values and Percentages[1] of Trade with Selected Overseas Countries via the United States, 1952 and 1953—concluded

Country	Imports via the United States				Domestic Exports via the United States			
	1952		1953		1952		1953	
	$'000	p.c.	$'000	p.c.	$'000	p.c.	$'000	p.c.
Other Asia								
Ceylon	1	--	7	—	516	8·9	337	10·2
India	442	1·6	204	0·8	1,582	2·9	1,142	3·1
Malaya and Singapore	370	1·5	1,001	4·6	4,239	60·0	832	29·2
Pakistan	2	1·0	27	4·8	1,343	8·4	437	1·4
Japan	479	3·6	1,421	10·4	3,574	3·5	6,782	5·7
Philippines	170	3·1	176	5·9	1,340	8·4	895	6·5
Totals, Other Asia[2]	**1,600**	**1·7**	**2,933**	**3·3**	**20,075**	**9·0**	**16,960**	**7·1**
Other Africa								
British East Africa	425	4·4	354	3·8	533	51·7	162	46·6
British West Africa	1,865	25·6	522	11·0	1,141	88·7	2,559	86·6
Southern Rhodesia	432	29·6	153	14·9	807	36·8	319	17·7
Union of South Africa	66	1·6	22	0·5	16,605	34·7	16,838	33·2
Belgian Congo	568	57·4	649	28·9	4,860	82·4	2,805	83·8
Totals, Other Africa[2]	**3,583**	**14·0**	**1,773**	**6·2**	**29,292**	**41·9**	**27,321**	**39·0**
Oceania								
Australia	13	0·1	53	0·2	21,629	43·5	13,742	34·7
New Zealand	—	—	3	—	3,672	19·5	701	9·4
Totals, Oceania[2]	**110**	**0·3**	**660**	**1·6**	**26,780**	**35·2**	**16,330**	**30·4**
Grand Totals[2]	**81,948**	**7·8**	**123,224**	**10·6**	**292,785**	**14·7**	**227,916**	**13·4**

[1] Percentage of total imports or exports credited to country or area. [2] Includes other countries not specified.

5.—Total Value of Imports, by Country, 1947-53, with Averages, 1935-39

Country	Averages 1935–39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
North America								
Newfoundland	2,188	9,427	11,091	918[1]	...	...	...	...
Alaska	93	744	1,323	1,218	976	1,483	2,333	2,961
Greenland	311	—	—	—	—	—	1	6
St. Pierre and Miquelon	26	15	11	12	18	25	48	66
United States	418,738	1,974,679	1,805,763	1,951,860	2,130,476	2,812,927	2,976,962	3,221,214
Totals, North America	**421,356**	**1,984,864**	**1,818,188**	**1,954,008**	**2,131,470**	**2,814,436**	**2,979,344**	**3,224,247**
Central America and Antilles								
Bahamas	[2]	615	648	818	532	346	406	427
Barbados	3,261	7,776	6,387	7,080	10,057	13,409	8,666	2,375
Bermuda	102	57	139	144	87	82	317	126
British Honduras	87	584	834	295	445	458	26	139
Jamaica	5,160	6,371	9,557	16,577	19,080	18,041	9,204	11,761
Leeward and Windward Islands	1,816	199	308	297	395	956	216	1,210
Trinidad and Tobago	2,387	5,654	9,027	14,575	15,205	15,082	9,660	8,062

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[1] January to March only. [2] Included with Leeward and Windward Islands.

5.—Total Value of Imports, by Country, 1947-53, with Averages, 1935-39—continued

Country	Averages 1935-39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Central America and Antilles—concluded								
American Virgin Islands...	[1]	16	46	14	12	166	—	—
Costa Rica................	77	727	3,109	2,119	3,378	8,785	8,740	9,472
Cuba......................	615	23,751	22,606	6,562	4,134	8,333	18,615	11,654
Dominican Republic.......	4	8,186	17,270	3,822	1,180	1,126	6,000	5,854
El Salvador...............	19	1,342	1,166	1,054	848	1,183	771	1,389
French West Indies........	1	19	57	123	[1]	[1]	2	—
Guatemala.................	67	9,488	8,209	5,743	5,781	4,618	2,080	3,259
Haiti.....................	63	227	176	1,026	1,769	3,020	1,928	748
Honduras..................	49	6,999	6,182	6,986	5,621	4,027	4,643	4,594
Mexico....................	667	16,980	27,258	25,494	32,974	18,013	23,937	15,785
Netherlands Antilles......	150	8,648	7,286	3,713	17,336	10,809	11,747	8,154
Nicaragua.................	[1]	87	172	179	339	596	501	391
Panama....................	32	2,107	1,226	2,572	5,478	3,492	4,125	3,637
Puerto Rico...............	13	270	1,583	523	931	1,276	846	872
Totals, Central America and Antilles...........	**14,570**	**100,103**	**123,246**	**99,717**	**125,582**	**113,818**	**112,431**	**89,909**
South America								
British Guiana............	5,846	12,358	15,380	22,355	21,735	25,025	23,660	17,800
Falkland Islands..........	[1]	—	—	—	—	—	—	—
Argentina.................	5,374	17,961	5,746	3,324	10,913	13,955	4,374	8,529
Bolivia...................	26	8	—	2,049	2,442	1,848	3,351	1,415
Brazil....................	920	13,888	20,559	21,163	28,178	40,627	35,103	35,047
Chile.....................	125	339	332	598	1,353	2,153	3,282	1,052
Colombia..................	5,139	9,197	8,668	12,588	13,342	13,063	18,004	23,215
Ecuador...................	41	207	889	1,137	1,473	2,438	2,751	2,688
French Guiana.............	1	[1]	—	—	—	—	—	3
Paraguay..................	62	232	230	374	350	343	346	260
Peru......................	3,554	407	1,989	2,465	3,961	5,588	8,050	2,928
Surinam...................	[1]	519	873	326	228	1,141	528	1,345
Uruguay...................	180	321	714	1,069	2,770	3,768	1,863	2,903
Venezuela.................	1,662	46,688	94,758	91,697	87,264	136,718	135,758	155,147
Totals, South America...	**22,930**	**102,123**	**150,138**	**159,145**	**174,010**	**246,666**	**237,073**	**252,332**
Northwestern Europe								
United Kingdom..........	124,047	189,370	299,502	307,450	404,213	420,985	359,757	453,391
Austria...................	245	89	281	382	964	3,191	2,917	2,967
Belgium and Luxembourg.	6,330	10,120	13,661	19,022	22,795	39,095	33,216	29,082
Denmark...................	165	1,455	9,585	1,893	1,406	3,730	2,167	2,175
France....................	6,382	8,755	12,648	13,309	14,669	23,974	19,117	22,267
Western Germany.........	10,364[2]	498[2]	1,729[2]	7,134[2]	11,026[2]	30,936[2]	22,629	35,507
Iceland...................	3	30	76	52	233	26	50	80
Ireland...................	69	76	85	71	148	785	462	582
Netherlands...............	3,984	3,530	5,831	6,688	8,896	14,010	16,495	22,298
Norway....................	742	4,999	1,103	1,212	1,405	2,977	3,857	2,289
Sweden....................	2,044	3,184	2,763	3,474	5,145	11,808	8,611	9,341
Switzerland...............	3,110	11,941	7,444	10,902	14,464	16,398	16,396	20,437
Totals, Northwestern Europe.................	**157,485**	**234,047**	**354,708**	**371,589**	**485,362**	**567,916**	**485,675**	**600,416**
Southern Europe								
Gibraltar.................	—	—	—	—	2	—	—	—
Malta.....................	2	12	5	22	20	47	51	67
Azores and Madeira.......	157	655	364	554	387	410	285	179
Greece....................	47	95	144	135	203	174	197	224
Italy.....................	2,403	3,872	6,981	9,048	9,373	14,217	11,735	14,271
Portugal..................	265	1,409	1,177	1,351	1,698	1,980	1,798	1,962
Spain.....................	989	3,002	2,586	2,427	3,558	7,114	4,260	4,619
Totals, Southern Europe	**3,863**	**9,047**	**11,257**	**13,537**	**15,240**	**23,943**	**18,326**	**21,322**

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[1] Less than $500. [2] Includes all Germany.

5.—Total Value of Imports, by Country, 1947-53, with Averages, 1935-39—continued

Country	Averages 1935-39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Eastern Europe								
Albania	1	—	—	—	—	—	—	—
Bulgaria	4	—	[1]	1	4	4	2	—
Czechoslovakia	1,979	3,645	4,809	6,401	6,036	4,668	3,559	2,589
Estonia	23	—	4	11	30	116	31	9
Finland	70	30	39	45	217	158	234	548
Germany, Eastern	[2]	[2]	[2]	[2]	[2]	[2]	492	959
Hungary	130	50	103	76	36	121	279	184
Latvia	11	—	1	4	3	33	36	7
Lithuania	4	—	2	2	—	12	16	3
Poland	185	3	22	183	357	1,430	556	244
Roumania	96	1	19	3	19	22	13	7
Union of Soviet Socialist Republics	341	181	4	11	80	358	2,234	824
Yugoslavia	99	22	5	45	122	149	101	101
Totals, Eastern Europe	**2,943**	**3,932**	**5,008**	**6,781**	**6,903**	**7,070**	**7,553**	**5,475**
Middle East								
Aden	4	—	5,531	884	12	22	7	10
Anglo-Egyptian Sudan	25	26	36	25	53	58	76	60
Arabia	[2]	[2]	[2]	12,127	28,115	22,659	7,559	2,196
Egypt	728	205	1,490	155	659	711	462	4,203
Ethiopia	5	9	38	49	31	31	21	44
Iran	126	299	959	288	192	521	1,168	1,025
Iraq	357	1,502	799	1,418	1,201	2,132	924	1,371
Israel	68	31	49	504	490	929	1,161	1,312
Italian Africa	[1]	3	—	—	2	3	—	—
Lebanon	6	30	28	429	62	16,381	15,171	19,584
Syria							72	56
Turkey	293	2,672	1,064	1,207	1,280	1,757	2,719	791
Totals, Middle East	**1,612**	**4,777**	**9,994**	**17,086**	**32,098**	**45,204**	**29,338**	**30,652**
Other Asia								
Ceylon	4,015	11,653	11,182	11,635	17,604	16,396	12,492	14,461
India	8,315	42,250	33,400	26,233	37,262	40,217	26,822	26,627
Pakistan			1,306	1,193	1,706	2,233	191	558
Hong Kong	842	982	1,866	2,989	2,203	3,001	3,711	4,427
Malaya and Singapore	11,154	16,908	21,878	16,187	28,852	57,980	25,473	21,896
Other British East Indies	79	30	52	21	47	4,623	1,772	350
Afghanistan	1	—	—	3	109	51	19	42
Burma	381	3	6	32	—	4	4	2
China	3,344	2,304	3,912	3,347	5,299	1,929	1,286	1,119
Taiwan								75
French East Indies	126	1	9	—	—	[1]	—	1
Indonesia	800	200	2,261	1,454	728	1,052	893	598
Japan	4,649	350	3,144	5,551	12,087	12,577	13,162	13,629
Korea	1	—	—	1	35	[1]	8	54
Philippines	563	8,063	6,442	4,203	6,425	8,954	5,423	2,986
Portuguese Asia	1	—	—	—	—	—	—	14
Thailand	84	28	79	72	1,181	1,938	764	896
Totals, Other Asia	**34,355**	**82,772**	**85,537**	**72,924**	**113,537**	**150,954**	**92,019**	**87,735**

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[1] Less than $500.

[2] Not listed separately.

5.—Total Value of Imports, by Country, 1947-53, with Averages, 1935-39—concluded

Country	Averages 1935-39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Other Africa								
British East Africa	2,683	7,683	9,543	6,094	15,067	10,864	9,593	9,393
Northern Rhodesia	[1]	29	19	59	51	9	15	2,837
Southern Rhodesia	316	181	484	798	401	1,496	1,459	1,027
Union of South Africa	4,210	4,228	3,816	3,862	4,964	5,372	4,165	4,616
Other British South Africa		[2]	[2]	—	—	—	—	8
Gambia	—	—	—	—	—	[2]	—	—
Gold Coast	701	6,493	9,751	6,709	8,999	7,112	5,523	3,159
Nigeria	370	2,149	4,939	2,593	1,486	898	1,764	1,584
Sierra Leone	7	18	5	10	294	49	6	2
Other British West Africa	[2]	—	—	—	[2]	—	—	—
Belgian Congo	5	815	1,644	703	1,481	3,052	990	2,247
Canary Islands	10	2	7	11	6	16	22	30
French Africa	61	252	112	17	543	398	404	2,631
Liberia	14	25	7	7	—	183	29	372
Madagascar	31	18	28	9	8	29	[2]	8
Morocco	32	36	346	142	704	1,071	1,049	529
Portuguese Africa	15	392	77	212	109	198	576	73
Spanish Africa	—	—	—	—	—	—	—	2
Totals, Other Africa	**8,455**	**22,320**	**30,779**	**21,224**	**34,113**	**30,748**	**25,595**	**28,518**
Oceania								
Australia	9,728	14,222	27,415	27,429	32,803	46,228	18,712	23,464
Fiji	2,341	4,178	8,275	7,997	10,194	5,993	6,487	5,554
New Zealand	4,754	10,831	11,603	8,910	11,855	30,107	14,231	8,572
Other British Oceania	3	—	—	—	—	—	—	—
French Oceania	3	18	—	417	476	360	1	—
Hawaii	186	709	796	361	495	1,414	3,473	4,635
United States Oceania	[2]	—	—	85	115	—	210	—
Totals, Oceania	**17,015**	**29,959**	**48,089**	**45,199**	**55,938**	**84,102**	**43,114**	**42,225**
Grand Totals	**684,582**	**2,573,944**	**2,636,945**	**2,761,207**	**3,174,253**	**4,084,856**	**4,030,468**	**4,382,830**
Totals, Commonwealth Countries	**194,442**	**354,284**	**503,980**	**494,158**	**645,624**	**727,089**	**544,462**	**623,962**
Totals, United States and Dependencies	**419,030**	**1,976,417**	**1,809,511**	**1,954,061**	**2,133,005**	**2,817,265**	**2,983,824**	**3,229,682**

[1] Included with Other British South Africa.

[2] Less than $500.

6.—Value of Domestic Exports, by Country, 1947-53, with Averages, 1935-39

Country	Averages 1935-39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
North America								
Newfoundland	8,048	55,085	55,055	9,229[1]	...	...	...	...
Alaska	154	300	865	1,008	959	2,264	1,249	1,130
Greenland	—	128	88	27	134	206	303	194
St. Pierre and Miquelon	309	1,158	1,432	1,208	1,061	1,186	1,279	1,319
United States	321,294	1,034,226	1,500,987	1,503,459	2,020,988	2,297,675	2,306,955	2,418,915
Totals, North America	**329,805**	**1,090,897**	**1,558,426**	**1,514,931**	**2,023,142**	**2,301,330**	**2,309,787**	**2,421,558**

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[1] January to March only.

6.—Value of Domestic Exports, by Country, 1947-53, with Averages, 1935-39—con.

Country	Averages 1935-39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Central America and Antilles								
Bahamas	[1]	3,688	3,636	2,268	1,937	2,136	2,353	2,298
Barbados	1,218	9,063	5,654	5,013	2,974	4,584	3,912	3,734
Bermuda	1,381	5,108	4,102	3,616	2,991	3,693	3,158	3,070
British Honduras	255	1,375	1,151	600	491	572	381	376
Jamaica	3,887	18,214	12,350	9,033	7,495	10,213	10,591	12,490
Leeward and Windward Islands	1,600	7,592	6,177	4,515	3,213	4,229	4,276	3,864
Trinidad and Tobago	3,372	26,354	17,105	12,325	7,476	9,950	11,034	9,490
American Virgin Islands	42	160	116	126	156	181	167	178
Costa Rica	103	1,780	1,216	1,859	2,312	2,175	2,612	2,199
Cuba	1,418	7,502	10,987	14,391	18,005	20,424	24,181	16,124
Dominican Republic	171	1,914	2,386	2,194	2,954	4,060	4,643	3,993
El Salvador	69	665	1,103	927	1,467	2,002	2,230	1,901
French West Indies	157	1,743	538	70	39	40	47	26
Guatemala	117	1,630	1,548	1,697	2,401	2,365	1,896	2,234
Haiti	131	1,366	1,393	1,602	2,513	2,588	3,417	2,670
Honduras	159	641	677	678	613	3,575	1,736	556
Mexico	2,630	11,701	15,045	15,411	17,624	29,880	39,641	28,986
Netherlands Antilles	176	1,844	2,175	2,003	4,464	1,834	1,541	1,308
Nicaragua	72	590	701	638	756	1,097	1,185	1,354
Panama	316	1,882	4,123	13,632	9,019	5,961	11,359	4,380
Puerto Rico	425	2,605	2,300	5,962	7,643	8,120	7,328	7,753
Totals, Central America and Antilles	**17,699**	**107,416**	**94,485**	**98,560**	**96,544**	**119,680**	**137,688**	**108,984**
South America								
British Guiana	1,344	10,273	8,229	5,676	4,052	5,308	6,356	4,777
Falkland Islands	[2]	39	[2]	7	1	2	31	41
Argentina	4,696	31,697	16,680	2,902	13,360	8,883	8,227	7,641
Bolivia	113	567	1,046	1,908	2,267	3,484	6,398	5,501
Brazil	4,012	31,660	28,601	17,259	15,806	53,684	81,367	37,561
Chile	848	4,392	4,495	3,633	6,864	13,751	10,090	3,945
Colombia	1,296	9,950	8,406	8,012	14,806	12,311	13,756	20,146
Ecuador	93	1,626	1,308	1,727	1,432	2,713	2,030	4,220
French Guiana	36	264	129	129	5	4	3	6
Paraguay	8	153	369	133	110	167	112	339
Peru	1,072	3,695	2,529	7,050	3,744	5,054	16,405	15,108
Surinam	49	826	695	960	863	934	1,097	712
Uruguay	310	3,371	4,201	2,282	1,918	6,868	5,429	2,912
Venezuela	1,139	12,989	16,935	27,689	25,457	26,982	35,683	36,485
Totals, South America	**15,016**	**111,501**	**93,622**	**79,367**	**90,684**	**140,145**	**186,984**	**139,394**
Northwestern Europe								
United Kingdom	353,741	751,198	686,914	704,956	469,910	631,461	745,845	665,232
Austria	27	3,070	3,110	3,706	2,369	2,166	5,216	5,136
Belgium and Luxembourg	13,204	52,749	33,035	56,525	66,351	94,457	104,376	69,510
Denmark	1,438	4,328	7,748	3,109	923	5,587	9,881	6,303
France	8,566	81,058	92,963	36,004	18,403	46,538	48,264	32,281
Western Germany	9,639[3]	6,690[3]	13,214[3]	23,451[3]	8,873[3]	37,028[3]	94,863	83,858
Iceland	28	2,485	1,845	743	847	700	833	2,058
Ireland	3,861	17,598	9,257	9,052	13,321	20,921	23,058	13,356
Netherlands	10,062	55,939	43,684	13,759	8,617	26,191	41,508	42,382
Norway	7,247	20,320	23,429	21,736	18,924	32,198	39,002	37,278
Sweden	3,593	17,461	7,207	5,516	4,250	12,125	12,198	4,587
Switzerland	948	14,196	19,389	32,281	26,435	25,345	26,918	29,833
Totals, Northwestern Europe	**412,354**	**1,027,093**	**941,795**	**910,839**	**639,223**	**934,716**	**1,151,964**	**991,814**

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[1] Included with Leeward and Windward Islands. [2] Less than $500. [3] Includes Eastern Germany.

6.—Value of Domestic Exports, by Country, 1947-53, with Averages, 1935-39—con.

Country	Averages 1935-39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Southern Europe								
Gibraltar	9	252	15	336	329	648	353	486
Malta	377	6,705	3,250	3,905	4,680	2,150	3,111	3,307
Greece	1,142	5,440	9,663	2,615	1,833	2,703	4,415	1,560
Italy	2,785	35,688	32,379	12,567	15,476	48,763	52,645	33,170
Portugal	170	3,502	5,181	8,405	5,641	4,665	4,026	3,991
Azores and Madeira	8	392	77	101	210	259	224	231
Spain	495	941	596	387	5,642	742	3,579	14,179
Totals, Southern Europe	**4,986**	**52,920**	**51,160**	**28,316**	**33,811**	**59,930**	**68,352**	**56,924**
Eastern Europe								
Albania	3	505	90	—	[1]	1	1	—
Bulgaria	10	14	123	279	215	8	2	3
Czechoslovakia	881	13,779	11,395	3,030	2,179	492	367	123
Estonia	5	[1]	—	[1]	—	—	—	—
Finland	539	1,212	2,280	607	600	3,129	2,694	1,388
Eastern Germany	[2]	[2]	[2]	[2]	[2]	[2]	—	—
Hungary	4	946	820	75	86	30	81	48
Latvia	242	—	—	—	—	—	—	—
Lithuania	196	—	[1]	[1]	1	—	—	—
Poland	805	15,380	5,804	1,945	1,432	94	69	183
Roumania	52	103	440	338	122	11	45	94
Union of Soviet Socialist Republics	336	4,866	112	93	182	7	[1]	—
Yugoslavia	18	6,729	2,250	734	818	2,739	22,613	1,940
Totals, Eastern Europe	**3,091**	**43,534**	**23,313**	**7,102**	**5,635**	**6,510**	**25,873**	**3,779**
Middle East								
Aden	109	1,602	2,653	57	31	25	127	34
Anglo-Egyptian Sudan	109	1,028	42	37	75	34	104	17
Arabia	[3]	[3]	[3]	3,142	875	1,414	2,149	2,644
Egypt	399	10,922	10,205	4,762	3,716	2,466	19,363	11,688
Ethiopia	[1]	94	74	42	54	198	54	55
Iran	118	946	684	11,987	993	1,000	585	753
Iraq	55	2,160	831	472	70	1,062	313	458
Israel	251	8,473	5,036	12,709	12,126	11,816	11,940	9,059
Italian Africa	2	7	[1]	92	184	3	6	—
Jordan	[3]	[3]	[3]	211	46	1,071	105	38
Libya	[1]	5	5	11	374	2,029	854	1,279
Lebanon	80	2,546	6,094	3,278	1,462	7,036	9,355	5,161
Syria							580	578
Turkey	388	2,229	2,012	14,121	3,744	2,962	4,791	1,455
Totals, Middle East	**1,511**	**30,012**	**27,636**	**50,921**	**23,749**	**31,117**	**50,326**	**33,219**
Other Asia								
Ceylon	246	4,079	1,710	2,159	4,353	3,470	5,825	3,307
India	3,732	42,947	33,698	72,551	31,520	35,737	55,423	37,187
Pakistan			7,775	18,097	8,681	4,486	16,016	32,103
Hong Kong	1,651	6,398	8,256	10,099	8,004	12,033	9,582	9,000
Malaya and Singapore	2,173	7,464	9,288	5,437	4,097	10,796	7,067	2,854
Other British East Indies	5	9	16	2	32	[1]	13	27

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[1] Less than $500. [2] Included with Western Germany. [3] Not listed separately.

6.—Value of Domestic Exports, by Country, 1947-53, with Averages, 1935-39—concl.

Country	Averages 1935–39	1947	1948	1949	1950	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Other Asia—concl.								
Afghanistan	[1]	36	43	14	52	97	272	150
Burma	71	823	173	54	30	279	1,023	444
China	3,808	34,984	29,128	13,801	2,057	367	1,156	—
Taiwan								1,482
French East Indies	85	858	498	177	69	223	327	351
Indonesia	801	5,807	7,959	4,640	3,052	5,227	6,250	1,990
Japan	21,880	559	8,001	5,860	20,533	72,976	102,603	118,568
Korea	3	30	23	233	1,143	213	335	14,991
Philippines	1,523	10,448	9,810	13,983	10,829	15,598	16,045	13,872
Portuguese Asia	1	147	104	162	103	107	282	190
Thailand	22	415	609	752	1,200	2,378	1,976	1,509
Totals, Other Asia	**36,001**	**115,003**	**117,092**	**148,022**	**95,757**	**163,986**	**224,196**	**238,025**
Other Africa								
British East Africa	789	4,682	3,473	1,730	849	1,444	1,031	348
Northern Rhodesia	[2]	450	606	553	395	281	467	414
Southern Rhodesia	970	7,369	2,711	2,665	1,202	2,669	2,195	1,806
Union of South Africa	15,457	66,674	83,248	77,713	42,561	52,736	47,852	50,763
Other British South Africa		15	6	15	5	27	12	15
Gambia	35	66	26	8	12	26	9	29
Gold Coast	270	1,652	2,072	1,489	581	980	254	1,749
Nigeria	145	2,285	876	1,068	247	796	865	942
Sierra Leone	203	811	717	303	219	200	159	235
Other British West Africa	[1]	2	6	[1]	[1]	1	—	1
Belgian Congo	89	1,292	2,241	2,459	2,471	4,318	5,900	3,349
Canary Islands	17	46	12	49	237	107	825	23
French Africa	248	4,598	2,747	2,243	1,927	6,748	3,226	1,248
Liberia	17	144	129	119	109	1,373	203	3,145
Madagascar	13	176	408	227	117	102	97	64
Morocco	711	1,447	1,700	1,268	1,700	3,381	4,630	3,809
Portuguese Africa	1,675	1,898	3,258	3,604	2,702	2,827	2,088	1,997
Spanish Africa	9	62	54	95	62	75	64	59
Totals, Other Africa	**20,648**	**93,668**	**104,291**	**95,607**	**55,393**	**78,090**	**69,878**	**69,996**
Oceania								
Australia	28,924	60,294	38,257	35,363	35,446	49,079	49,697	39,629
Fiji	387	1,386	492	598	234	802	519	424
New Zealand	12,799	37,386	18,375	14,489	10,983	21,757	18,844	7,475
Other British Oceania	25	63	156	61	15	82	71	64
French Oceania	80	230	153	295	737	626	424	487
Hawaii	1,207	3,299	5,867	8,311	6,830	6,418	6,280	5,385
United States Oceania	2	199	318	182	205	191	198	253
Totals, Oceania	**43,424**	**102,857**	**63,619**	**59,299**	**54,449**	**78,955**	**76,033**	**53,717**
Grand Totals	**884,536**	**2,774,902**	**3,075,438**	**2,992,961**	**3,118,387**	**3,914,460**	**4,301,081**	**4,117,406**
Totals, Commonwealth Countries	**443,261**	**1,141,608**	**1,018,099**	**1,005,972**	**655,089**	**872,407**	**1,007,533**	**897,585**
Totals, United States Dependencies	**323,124**	**1,040,789**	**1,510,453**	**1,519,048**	**2,036,780**	**2,314,848**	**2,322,177**	**2,433,614**

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[1] Less than $500. [2] Included with Other British South Africa.

7.—Value of Trade with Commonwealth and Foreign Countries, Significant Years, 1886-1953

Item and Year	Canadian Trade with—							
	United Kingdom		United States		Other Commonwealth Countries		Other Foreign Countries	
	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total	Value	P.C. of Total
	$'000		$'000		$'000		$'000	
Imports								
Ended Mar. 31—								
1886	39,033	40·7	42,819	44·6	2,384	2·5	11,757	12·2
1891	42,019	37·7	52,033	46·7	2,318	2·1	15,163	13·5
1896	32,825	31·2	53,529	50·8	2,389	2·2	16,619	15·8
1901	42,820	24·1	107,378	60·3	3,833	2·2	23,900	13·4
1906	69,184	24·4	169,256	59·6	14,606	5·1	30,694	10·9
1911	109,935	24·3	275,824	60·8	19,533	4·4	47,433	10·5
1916	77,404	15·2	370,881	73·0	27,826	5·5	32,091	6·3
1921	213,974	17·3	856,177	69·0	52,029	4·2	117,979	9·5
Ended Dec. 31—								
1926	164,707	16·3	668,747	66·3	49,907	5·0	124,980	12·4
1929	194,778	15·0	893,585	68·8	62,287	4·8	148,343	11·4
1937	147,292	18·2	490,505	60·7	89,304	11·0	81,796	10·1
1939	114,007	15·2	496,898	66·1	74,893	10·0	65,257	8·7
1943	134,965	7·7	1,423,672	82·1	103,666	6·0	72,773	4·2
1946	201,433	10·4	1,405,297	72·0	139,067	7·2	181,482	9·4
1947	189,370	7·4	1,974,679	76·7	165,024	6·4	244,871	9·5
1948	299,502	11·4	1,805,763	68·5	204,612	7·7	327,069	12·4
1949	307,450	11·1	1,951,860	70·7	186,779	6·8	315,118	11·4
1950	404,213	12·7	2,130,476	67·1	241,411	7·6	398,153	12·5
1951	420,985	10·3	2,812,927	68·9	306,104	7·5	544,840	13·3
1952	359,757	8·9	2,976,962	73·9	184,704	4·6	509,044	12·6
1953	453,391	10·3	3,221,214	73·5	170,571	3·9	537,654	12·3
Exports (Domestic)								
Ended Mar. 31—								
1886	36,694	47·2	34,284	44·1	3,263	4·2	3,515	4·5
1891	43,244	48·8	37,743	42·6	3,893	4·4	3,791	4·2
1896	62,718	57·2	37,789	34·4	4,048	3·7	5,152	4·7
1901	92,858	52·3	67,984	38·3	7,891	4·5	8,700	4·9
1906	127,456	54·2	83,546	35·5	10,965	4·6	13,516	5·7
1911	132,157	48·2	104,116	38·0	16,811	6·1	21,233	7·7
1916	451,852	60·9	201,106	27·1	30,677	4·2	57,974	7·8
1921	312,845	26·3	542,323	45·6	90,607	7·6	243,389	20·5
Ended Dec. 31—								
1926	459,223	36·4	457,878	36·3	95,701	7·6	248,439	19·7
1929	290,295	25·2	492,686	42·8	105,006	9·1	264,430	22·9
1937	402,062	40·3	360,012	36·1	104,159	10·4	131,134	13·2
1939	328,099	35·5	380,392	41·1	102,707	11·1	113,728	12·3
1943	1,032,647	34·8	1,149,232	38·7	369,015	12·4	420,581	14·2
1946	597,506	25·8	887,941	38·4	307,195	13·3	519,574	22·4
1947	751,198	27·1	1,034,226	37·3	417,303	15·0	572,175	20·6
1948	686,914	22·3	1,500,987	48·8	345,477	11·3	542,060	17·6
1949	704,956	23·6	1,503,459	50·2	310,067	10·4	474,480	15·9
1950	469,910	15·1	2,020,988	64·8	185,179	5·9	442,310	14·2
1951	631,461	16·1	2,297,675	58·7	240,946	6·2	744,379	19·0
1952	745,845	17·3	2,306,955	53·7	261,687	6·1	986,593	22·9
1953	665,232	16·2	2,418,915	58·7	232,352	5·6	800,906	19·5

8.—Values of Dutiable and Free Imports, by Leading Countries, 1951-53

Country	1951			1952			1953		
	Dutiable	Free	Total	Dutiable	Free	Total	Dutiable	Free	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
North America									
United States	1,624,802	1,188,125	2,812,927	1,694,823	1,282,139	2.976,962	1,904,030	1,317,184	3,221,214
Totals, North America[1]	**1,626,245**	**1,188,191**	**2,814,436**	**1,697,078**	**1,282,264**	**2,979,343**	**1,906,669**	**1,317,578**	**3,224,247**
Central America and Antilles									
Barbados	10,562	2,846	13,409	6,976	1,690	8,666	589	1,786	2,375
Jamaica	16,705	1,336	18,041	8,453	751	9,204	11,069	693	11,761
Trinidad and Tobago	8,371	6,711	15,082	3,972	5,687	9,659	405	7,657	8,062
Costa Rica	8,785	—	8,785	8,736	4	8,740	9,456	17	9,473
Cuba	6,848	1,485	8,333	16,785	1,831	18,615	10,326	1,328	11,654
Dominican Republic	1,107	19	1,126	5,870	130	6,000	5,794	60	5,854
Honduras	4,013	14	4,027	4,636	7	4,643	4,581	13	4,594
Mexico	7,841	10,171	18,012	6,027	17,911	23,937	7,327	8,458	15,785
Netherlands Antilles	10,657	152	10,809	11,530	217	11,747	7,802	352	8,154
Panama	3,487	5	3,492	4,123	2	4,125	3,581	55	3,637
Totals, Central America and Antilles[1]	**86,617**	**27,199**	**113,817**	**81,717**	**30,713**	**112,429**	**67,708**	**22,202**	**89,910**
South America									
British Guiana	15,534	9,491	25,025	13,891	9,769	23,660	6,809	10,990	17,799
Argentina	10,539	3,416	13,955	2,365	2,010	4,374	1,779	6,749	8,528
Brazil	27,617	13,009	40,627	23,804	11,299	35,103	24,424	10,622	35,046
Colombia	13,032	30	13,063	17,145	860	18,005	21,289	1,926	23,215
Peru	278	5,310	5,588	384	7,666	8,050	735	2,193	2,928
Venezuela	11,001	125,716	136,718	8,631	127,127	135,758	10,199	144,947	155,146
Totals, South America[1]	**83,174**	**163,490**	**246,667**	**70,522**	**166,550**	**237,071**	**68,983**	**183,349**	**252,332**
Northwestern Europe									
United Kingdom	173,624	247,361	420,985	156,819	202,938	359,757	193,695	259,696	453,391
Belgium and Luxembourg	29,522	9,573	39,095	26,697	6,519	33,216	20,248	8,834	29,082
France	18,968	5,005	23,974	14,864	4,252	19,117	15,526	6,741	22,267
Western Germany	25,394[2]	5,542[2]	30,936[2]	6,196	6,433	22,629	25,643	9,864	35,507
Netherlands	7,508	6,503	14,011	8,075	8,419	16,495	11,137	11,161	22,298
Norway	2,074	903	2,977	1,253	2,604	3,857	1,707	583	2,290
Sweden	9,827	1,981	11,808	6,981	1,630	8,611	7,746	1,595	9,341
Switzerland	13,712	2,686	16,398	13,733	2,663	16,396	17,320	3,116	20,436
Totals, Northwestern Europe[1]	**286,925**	**280,989**	**567,916**	**248,910**	**236,762**	**485,674**	**297,616**	**302,801**	**600,417**

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[1] Includes other countries not specified.

[2] Includes Eastern Germany.

8.—Values of Dutiable and Free Imports, by Leading Countries, 1951-53—concluded

Country	1951			1952			1953		
	Dutiable	Free	Total	Dutiable	Free	Total	Dutiable	Free	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Southern Europe									
Italy	11,471	2,746	14,217	8,555	3,181	11,735	10,734	3,537	14,271
Spain	5,463	1,651	7,114	1,886	2,374	4,260	1,833	2,786	4,619
Totals, Southern Europe[1]	**18,508**	**5,435**	**23,942**	**12,143**	**6,183**	**18,325**	**13,952**	**7,369**	**21,321**
Totals, Eastern Europe	**5,306**	**1,763**	**7,069**	**4,564**	**2,989**	**7,553**	**3,929**	**1,547**	**5,476**
Middle East									
Arabia	—	22,659	22,659	10	7,549	7,559	5	2,191	2,196
Lebanon and Syria	68	16,313	16,381	44	15,199	15,243	41	19,599	19,640
Totals, Middle East[1]	**3,333**	**41,874**	**45,205**	**1,605**	**27,733**	**29,339**	**1,385**	**29,266**	**30,651**
Other Asia									
Ceylon	467	15,929	16,396	723	11,769	12,492	965	13,496	14,461
India	6,264	33,952	40,217	3,026	23,795	26,822	4,677	21,950	26,627
Malaya and Singapore	305	57,675	57,980	239	25,234	25,473	162	21,734	21,896
Japan	11,490	1,087	12,577	11,418	1,744	13,162	12,205	1,425	13,630
Philippines	244	8,710	8,954	225	5,198	5,423	62	2,924	2,986
Totals, Other Asia[1]	**24,101**	**126,853**	**150,957**	**18,964**	**73,054**	**92,019**	**21,975**	**65,759**	**87,734**
Other Africa									
British East Africa	2,789	8,075	10,864	2,128	7,465	9,593	5,524	3,869	9,393
Gold Coast	3,302	3,810	7,112	2,653	2,870	5,523	2,523	636	3,159
Union of South Africa	698	4,673	5,372	627	3,538	4,165	826	3,790	4,616
Totals, Other Africa[1]	**10,606**	**20,140**	**30,747**	**8,340**	**17,253**	**25,594**	**15,643**	**12,874**	**28,517**
Oceania									
Australia	16,559	29,669	46,227	4,708	14,004	18,712	9,889	13,575	23,464
Fiji	5,986	7	5,993	6,487	—	6,487	5,552	2	5,554
New Zealand	5,543	24,564	30,107	4,395	9,836	14,231	483	8,089	8,572
Totals, Oceania[1]	**29,485**	**54,617**	**84,101**	**19,036**	**24,078**	**43,114**	**20,101**	**22,125**	**42,226**
Grand Totals	**2,174,304**	**1,910,552**	**4,084,856**	**2,162,882**	**1,867,585**	**4,030,468**	**2,417,960**	**1,964,870**	**4,382,830**
Totals, Commonwealth Countries	**270,576**	**456,513**	**727,089**	**219,547**	**324,915**	**544,462**	**251,738**	**372,224**	**623,962**
Totals, Other Countries	**1,903,728**	**1,454,040**	**3,357,768**	**1,943,335**	**1,542,671**	**3,486,606**	**2,166,222**	**1,592,646**	**3,758,868**

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[1] Includes other countries not specified.

The proportion of imports subject to duty varies widely between countries and geographic areas. Generally, the Canadian tariff imposes duties on a greater proportion of manufactured goods than of natural products. Countries supplying chiefly manufactures to Canada tend to have duties charged on a greater proportion of their goods and also to have relatively higher average *ad valorem* rates of duty charged on their goods than is the case with countries supplying chiefly natural products. Variations in the proportion of imports dutiable as between different countries, or in the average *ad valorem* rates of duty charged on imports from different countries, therefore, do not necessarily indicate differences in the tariff relations between Canada and these countries.

9.—Average Ad Valorem Rates of Duty Collected and Percentage Proportions of Imports from the United Kingdom and from the United States to Totals of Dutiable and Free Imports, 1944-53.

Note.—Figures for the years ended Mar. 31, 1868-1938, are given in the 1940 Year Book, p. 532. Calendar-year figures for 1939-43 are given in the 1954 edition, p. 982.

Year	United Kingdom					United States				
	Average Ad Valorem Rates of Duty on—		Dutiable to Total Dutiable	Free to Total Free	Per-centage of All Imports	Average Ad Valorem Rates of Duty on—		Dutiable to Total Dutiable	Free to Total Free	Per-centage of All Imports
	Dutiable Imports	Total Imports				Dutiable Imports	Total Imports			
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
1944...	16·3	6·1	4·7	7·9	6·3	18·7	10·2	89·0	75·5	82·3
1945...	17·6	4·7	4·7	13·1	8·9	19·3	11·1	86·6	64·8	75·8
1946...	17·5	4·5	4·8	17·7	10·5	19·4	12·7	85·4	57·0	72·9
1947...	15·9	6·4	4·9	11·3	7·4	19·5	13·1	84·9	64·0	76·7
1948...	17·1	7·7	9·8	13·1	11·4	15·7	9·1	76·2	60·0	68·5
1949...	16·2	6·9	9·1	13·4	11·1	16·0	9·0	75·6	65·3	70·7
1950...	16·6	6·2	9·3	16·3	12·7	16·3	9·0	72·6	61·4	67·1
1951...	15·8	6·5	8·0	12·9	10·3	16·5	9·5	74·7	62·2	68·9
1952...	16·5	7·2	7·3	10·9	8·9	16·8	9·6	78·4	68·7	73·9
1953...	16·1	6·9	8·0	13·2	10·3	17·4	10·3	78·7	67·0	73·5

Section 4.—Trade by Commodities

The tables in this Section provide detailed information on the composition of Canada's imports and exports, with commodities shown by group and individually.

10.—Imports and Exports, by Main Group, 1951-53

Group	Imports			Domestic Exports			Total Trade[1]		
	1951	1952	1953	1951	1952	1953	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
United Kingdom									
Agricultural and vegetable products	21,316	23,725	26,506	231,585	256,458	305,302	253,040	280,562	331,835
Animals and animal products	12,778	10,175	13,447	29,860	35,948	18,581	42,695	46,631	32,326
Fibres, textiles and textile products	139,094	86,432	113,352	1,265	1,013	1,144	140,878	88,333	114,984
Wood, wood products and paper	4,345	4,338	4,972	141,181	165,045	110,604	145,568	169,411	115,626
Iron and its products	126,553	122,539	161,540	19,914	37,951	27,481	148,344	162,475	190,233
Non-ferrous metals and their products	42,621	43,203	51,991	181,635	222,860	180,157	225,097	266,224	232,334
Non-metallic minerals and their products	32,864	27,318	30,154	13,073	13,770	8,603	46,124	41,393	38,903
Chemicals and allied products	16,188	12,225	18,551	10,370	9,712	8,551	26,806	22,054	27,236
Miscellaneous commodities	25,225	29,803	32,879	2,579	3,087	4,809	28,153	33,722	38,788
Totals, United Kingdom	**420,985**	**359,757**	**453,391**	**631,461**	**745,845**	**665,232**	**1,056,705**	**1,110,806**	**1,122,265**
United States									
Agricultural and vegetable products	208,451	220,647	218,294	263,443	301,307	271,298	472,857	524,162	490,648
Animals and animal products	73,546	49,696	55,226	265,528	147,966	179,372	341,327	201,587	237,185
Fibres, textiles and textile products	220,966	197,369	194,178	19,588	17,442	14,890	244,841	217,939	211,414
Wood, wood products and paper	125,630	123,517	146,848	1,114,581	1,081,016	1,091,450	1,240,943	1,205,155	1,239,181
Iron and its products	1,146,844	1,230,801	1,324,656	169,188	172,701	182,872	1,330,364	1,418,089	1,523,958
Non-ferrous metals and their products	192,827	198,039	261,344	278,009	349,650	408,521	473,655	551,376	673,979
Non-metallic minerals and their products	435,856	419,453	415,704	89,926	96,640	107,009	530,719	522,370	530,283
Chemicals and allied products	165,061	166,249	191,812	67,253	75,107	84,599	233,607	242,556	277,572
Miscellaneous commodities	243,748	371,191	413,151	30,159	65,125	78,904	278,527	442,773	500,046
Totals, United States	**2,812,927**	**2,976,962**	**3,221,214**	**2,297,675**	**2,306,955**	**2,418,914**	**5,146,839**	**5,326,007**	**5,684,266**
All Countries									
Agricultural and vegetable products	542,641	489,192	488,368	894,210	1,183,496	1,096,763	1,438,395	1,675,662	1,586,602
Animals and animal products	125,562	85,540	88,227	348,033	237,942	250,919	476,207	328,163	342,226
Fibres, textiles and textile products	483,520	359,440	387,115	36,858	27,697	24,333	528,754	392,109	415,238
Wood, wood products and paper	137,047	134,554	160,951	1,399,076	1,366,787	1,295,396	1,536,973	1,502,025	1,457,344
Iron and its products	1,332,251	1,406,627	1,531,556	342,299	406,946	358,438	1,692,766	1,834,318	1,911,354
Non-ferrous metals and their products	290,848	296,875	364,571	569,870	706,732	682,183	865,139	1,007,810	1,051,642
Non-metallic minerals and their products	684,535	641,885	658,476	131,529	143,474	147,393	821,392	792,066	813,795
Chemicals and allied products	191,813	187,713	221,834	131,690	124,565	137,885	325,596	314,048	361,446
Miscellaneous commodities	296,638	428,642	481,733	60,895	103,441	124,095	363,018	540,227	615,784
Totals, All Countries	**4,084,856**	**4,030,468**	**4,382,830**	**3,914,460**	**4,301,081**	**4,117,406**	**8,048,241**	**8,386,427**	**8,555,431**

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[1] Includes exports of foreign produce.

11.—Leading Imports, 1930, 1939, 1946 and 1951-53

Note.—Commodities are arranged in order of value in 1953.

Commodity	1930	1939	1946	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000
Machinery (non-farm) and parts	50,435	42,831	130,287	328,741	360,969	401,856
Automobile parts (except engines)	23,359	25,308	66,453	195,177	190,337	222,284
Petroleum, crude and partly refined	41,787	39,650	89,483	233,148	210,036	213,094
Electrical apparatus, *n.o.p.*	30,281	27,891	47,788	120,101	139,567	198,275
Tractors and parts	10,763	15,003	45,620	125,562	119,253	126,354
Rolling-mill products (iron and steel)	46,509	32,336	53,376	173,127	143,133	124,813
Aircraft and parts (except engines)	1,346	5,550	9,448	41,438	95,212	111,803
Engines, internal combustion, and parts	9,345	7,096	19,650	80,314	126,332	107,736
Coal, bituminous	25,858	19,640	77,052	115,275	99,571	94,680
Farm implements and machinery (except tractors) and parts	11,181	5,915	22,732	69,529	78,044	82,795
Automobiles, passenger	15,898	13,725	25,209	56,632	49,484	79,454
Tourist purchases	[1]	9,487	9,125	47,071	66,682	73,840
Fuel oils	3,228	1,650	33,066	58,389	64,908	65,151
Non-commercial items	12,259	5,430	14,173	32,544	47,095	60,923
Pipes, tubes and fittings (iron and steel)	4,103	2,340	8,411	43,183	57,261	58,327
Coffee, green	4,505	4,110	15,473	48,438	50,775	57,595
Cotton fabrics	13,443	10,935	54,163	54,984	53,248	55,906
Refrigerators and freezers	2,101	1,189	5,201	30,620	43,891	55,530
Cotton, raw	14,216	17,176	42,812	94,315	65,956	55,494
Principal chemicals (except acids) *n.o.p.*	8,845	12,321	16,734	43,940	49,824	54,505
Gasoline	16,330	7,998	14,912	33,444	39,148	48,650
Sugar, unrefined	3,638	9,983	32,416	77,100	59,546	47,491
Wool fabrics	19,503	10,408	20,115	38,567	32,213	41,743
Coal, anthracite	30,099	21,938	41,987	51,238	49,430	40,079
Paperboard, paper and products	12,908	8,654	18,834	34,831	29,921	39,208
Apparel (except hats) of all textiles	16,614	6,941	12,222	25,000	26,091	35,672
Cooking and heating apparatus, and parts	1,561	2,332	10,462	18,911	22,444	33,538
Newspapers, magazines and advertising matter	5,055	8,436	13,434	25,133	28,385	33,446
Synthetic plastics, primary forms	[1]	2,506	15,386	22,413	23,020	32,498
Parcels of small value	5,642	4,185	14,460	22,025	33,691	32,396
Tools	2,351	2,377	10,135	19,117	22,566	31,004
Vegetables, fresh	7,192	6,150	25,748	26,295	37,969	29,250
Iron ore	3,324	4,179	6,467	22,671	26,519	28,194
Citrus fruits, fresh	13,020	8,860	34,632	26,699	26,712	26,509
Rubber, crude and semi-fabricated	9,987	12,860	10,013	64,973	29,287	26,408
Logs, timber and lumber	7,523	3,767	6,035	23,210	20,798	23,585
Drugs and medicines	3,652	3,992	9,440	22,981	22,111	22,877
Bananas, fresh	2,540	2,398	20,119	19,598	20,939	22,837
Vegetable oils (except essential oils)	10,556	7,778	11,302	35,025	19,098	22,390
Wool, raw	3,195	4,509	18,707	54,361	18,052	22,334

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[1] Not listed separately.

12.—Leading Domestic Exports, 1930, 1939, 1946 and 1951-53

NOTE.—Commodities are arranged in order of value in 1953.

Commodity	1930	1939	1946	1951	1952	1953
	$'000	$'000	$'000	$'000	$'000	$'000
Newsprint paper	133,371	115,687	265,865	536,372	591,790	619,033
Wheat	185,786	109,051	250,306	441,043	621,292	567,907
Planks and boards	36,743	48,829	125,391	312,198	295,949	282,736
Wood pulp	39,060	31,000	114,021	365,133	291,863	248,675
Aluminum, primary and semi-fabricated	8,110	25,950	51,390	120,853	155,106	173,378
Nickel, primary and semi-fabricated	20,505	57,934	55,205	136,689	150,982	162,542
Barley	987	7,882	9,688	58,822	145,684	136,729
Copper, primary and semi-fabricated	31,233	52,396	34,940	81,691	100,806	117,351
Wheat flour	37,540	16,378	126,733	113,854	116,055	102,160
Asbestos, unmanufactured	8,453	2,902	23,839	80,333	86,510	83,973
Farm implements and machinery (except tractors) and parts	10,302	6,975	28,662	96,873	95,692	67,821
Whisky	21,747	7,914	29,650	54,039	54,254	63,086
Oats	1,061	4,142	23,108	53,899	68,240	60,403
Zinc, primary and semi-fabricated	6,254	9,922	27,659	83,669	96,283	57,572
Fish, fresh and frozen	8,475	10,212	31,110	53,363	52,852	51,219
Pulpwood	13,612	11,901	28,731	68,103	64,820	45,859
Fertilizers, chemical	5,606	9,179	32,108	35,734	42,293	42,633
Aircraft and parts (except engines)	113	347	9,507	7,524	37,503	40,247
Lead, primary and semi-fabricated	8,274	9,850	16,715	45,290	49,676	37,835
Electrical apparatus, *n.o.p.*	2,291	3,229	20,939	17,729	33,892	37,705
Machinery (non-farm) and parts	6,109	10,873	15,535	40,271	47,378	37,282
Automobiles, passenger	4,750	4,206	11,340	38,490	43,634	36,061
Iron ore	3	43	4,353	18,576	22,333	30,843
Pigs, ingots, blooms and billets (iron and steel)	67	2,691	3,328	14,433	25,032	29,508
Abrasives, artificial, crude	2,842	4,380	11,727	21,377	17,701	28,976
Platinum metals and scrap	1,627	6,178	15,450	30,359	30,627	26,290
Guns, rifles and other firearms	[1]	16	4,145	15	5,627	24,110
Fodders, *n.o.p.*	2,782	6,729	13,288	25,319	29,483	23,143
Fish, cured	8,583	3,884	13,808	27,588	25,538	22,271
Automobiles, freight	6,061	8,157	43,201	24,873	48,832	22,258
Fur skins, undressed	15,202	14,130	30,928	28,316	23,507	21,070
Shingles	4,132	8,225	11,211	27,483	20,002	20,913
Non-commercial items	6,213	2,402	39,951	17,378	18,720	20,295
Rye	527	2,045	8,904	13,457	17,198	20,186
Cartridges, gun and rifle	40	801	694	2,373	10,139	19,873
Plywoods and veneers	145	1,608	12,026	18,046	18,655	19,025
Ships sold	626	373	17,856	8,070	10,592	18,453
Molluscs and crustaceans	5,642	3,542	14,162	15,228	17,510	17,588
Ferro-alloys	2,694	2,477	9,485	31,347	30,380	17,207
Automobile parts (except engines)	1,588	2,992	21,110	15,763	18,549	16,999

[1] Less than $500.

Detailed Imports and Exports.—Detailed statistics of all commodities of any importance imported into Canada from all countries, from the United Kingdom and from the United States, during the calendar years 1950-53, are given in Table **13** while corresponding statistics for domestic exports appear in Table **14**.

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries			
			1950	1951	1952	1953
	I. Agricultural and Vegetable Products					
	A. MAINLY FOOD					
	Fruits—					
1	Fruits, fresh	$	57,883,759	59,687,372	63,460,360	66,997,129
2	Fruits, dried	lb.	91,754,819	90,770,584	99,007,788	112,161,647
		$	11,878,275	12,752,567	12,952,208	15,320,398
3	Fruits, canned or preserved	$	10,832,511	13,541,824	13,276,921	13,088,744
4	Fruit juices and fruit syrups	gal.	9,900,719	10,686,943	13,811,557	15,244,162
		$	10,391,102	8,753,428	10,071,300	13,881,768
	Totals, Fruits	$	90,985,647	94,735,191	99,760,789	109,288,039
5	Nuts	$	22,372,557	22,780,324	21,077,298	20,049,212
	Vegetables—					
6	Vegetables, fresh	$	23,258,901	26,295,324	37,968,933	29,250,036
7	Vegetables, dried	$	453,176	1,598,925	1,353,918	2,756,469
8	Vegetables, canned	lb.	1,613,446	14,558,732	33,546,967	16,881,421
		$	336,625	1,848,116	3,477,283	2,170,766
9	Pickles, sauces and catsups	gal.	451,245	1,830,485	3,313,928	3,904,666
		$	454,810	1,647,830	2,960,110	3,484,280
	Totals, Vegetables	$	24,503,512	31,390,195	45,760,244	37,661,551
	Grains and Farinaceous Products—					
10	Grains	$	36,041,202	40,799,292	32,106,932	28,317,002
11	Milled products	$	649,222	1,060,661	1,476,553	829,507
12	Prepared foods and bakery products	$	2,401,701	3,911,085	3,849,491	5,413,041
13	Other farinaceous products	$	314,868	315,013	330,027	506,647
	Totals, Grains and Farinaceous Products	$	39,406,993	46,086,051	37,763,003	35,066,197
14	Oils, vegetable, for food	$	3,085,866	4,020,548	2,134,033	2,821,097
15	Sugar and its products	$	86,944,954	85,862,388	71,299,307	60,046,405
16	Cocoa and chocolate	$	16,018,701	11,733,095	15,022,057	16,406,430
17	Coffee and chicory	lb.	83,913,500	89,765,806	99,739,245	110,106,693
		$	42,545,733	49,597,626	52,873,922	60,858,498
18	Spices	lb.	5,660,407	5,390,009	4,556,424	5,579,412
		$	4,388,938	3,755,983	3,095,958	3,564,237
19	Tea	lb.	55,198,271	42,456,287	45,908,126	45,839,662
		$	28,610,731	21,017,954	18,825,750	19,872,205
20	Other vegetable products mainly food	$	2,975,921	2,690,506	2,905,380	3,822,574
	TOTALS, A. MAINLY FOOD	$	361,839,553	373,669,861	370,517,741	369,456,445
	B. OTHER THAN FOOD					
	Beverages, Alcoholic—					
21	Brewed	$	163,697	245,634	253,753	274,300
22	Distilled	pf. gal.	2,257,276	3,098,723	3,995,406	3,867,588
		$	14,525,215	15,589,620	17,457,092	16,693,085
23	Wines	$	2,171,163	2,545,267	2,998,745	3,351,616
	Totals, Beverages, Alcoholic	$	16,860,075	18,380,521	20,709,590	20,319,001
24	Gums and resins	$	5,998,974	6,450,067	5,052,344	5,056,834
25	Oil cake and oil cake meal	cwt.	401,352	921,977	442,715	745,566
		$	1,626,823	3,781,402	2,088,690	2,754,877
26	Oils, vegetable, not food	$	31,162,293	34,929,198	20,343,128	23,243,412
27	Plants, shrubs, trees and vines	$	2,265,085	2,932,625	3,393,741	3,921,609
28	Rubber and manufactures of	$	48,679,690	84,529,303	52,134,919	50,569,545
29	Seeds	$	7,132,545	8,453,292	4,716,096	2,511,908
30	Tobacco and manufactures of	$	3,998,898	3,668,036	4,623,941	5,204,043
31	Other vegetable products, not food	$	4,911,395	5,846,864	5,612,188	5,330,469
	TOTALS, B. OTHER THAN FOOD	$	122,635,778	168,971,308	118,674,637	118,911,698
	Totals, Agricultural and Vegetable Products	$	**484,475,331**	**542,641,169**	**489,192,378**	**488,368,143**

the United Kingdom and the United States, 1950-53

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
—	—	114	2,959	34,791,540	37,890,484	40,062,655	41,581,352	1
332,473	48	770	79,170	32,552,198	38,040,220	43,679,875	44,233,950	2
40,331	22	65	5,804	5,015,566	6,194,660	6,077,580	6,385,328	
448,478	599,566	687,490	854,710	2,224,675	5,789,100	5,893,862	6,069,348	3
130,444	11,675	21,391	29,065	6,993,565	9,327,771	11,833,425	12,169,363	4
111,083	18,981	31,085	47,133	7,985,420	7,710,801	8,798,197	11,874,916	
599,892	618,569	718,754	910,606	50,017,201	57,585,045	60,832,294	65,910,944	
92,356	59,870	92,425	185,215	4,404,703	3,979,964	3,637,487	3,833,429	5
2,299	1,186	34,657	336	20,918,172	22,677,187	34,053,975	25,867,969	6
224,879	1,042,882	497,476	355,889	118,236	474,356	780,724	2,292,872	7
1,170	9,169	3,295	51,061	530,225	9,448,669	27,030,120	12,276,659	8
110	920	612	7,268	93,553	1,038,858	2,544,524	1,475,965	
14,845	9,161	16,607	23,120	176,512	1,436,783	2,988,797	3,383,398	9
33,842	23,016	46,698	59,949	126,488	1,264,765	2,549,428	2,886,173	
261,130	1,068,004	579,443	423,442	21,256,449	25,455,166	39,928,651	32,522,979	
1,093	—	11	1,392	32,950,231	37,612,833	31,383,375	27,528,204	10
949	2,223	1,171	4,193	621,686	1,047,205	1,458,150	747,607	11
1,758,430	2,360,576	2,189,811	2,797,156	536,605	1,423,660	1,494,433	2,335,190	12
28	601	385	610	193,914	220,303	249,206	355,722	13
1,760,500	2,363,400	2,191,378	2,803,351	34,302,436	40,304,001	34,585,164	30,966,723	
61,982	—	3,174	51,963	2,550,912	3,752,334	1,663,387	2,275,769	14
4,579,000	3,121,993	4,631,470	4,655,116	737,877	1,440,132	2,493,035	3,263,403	15
2,761,086	275,339	974,847	471,358	1,603,983	3,313,542	6,149,396	6,386,666	16
2,521,093	371,117	251,382	1,400,889	1,455,273	1,903,475	2,850,982	4,568,029	17
1,379,052	213,059	140,444	793,520	1,087,302	1,574,840	2,550,403	4,396,290	
842,695	603,472	695,058	727,090	888,564	832,399	554,788	549,631	18
448,320	311,369	320,598	342,582	552,865	543,922	397,663	335,137	
458,752	513,491	1,836,029	4,264,866	71,937	48,808	138,464	35,101	19
251,510	290,363	673,941	2,179,138	44,508	24,539	81,379	20,865	
271,248	239,359	388,058	334,721	2,467,421	2,326,257	2,288,009	3,375,146	20
12,466,076	8,561,325	10,714,532	13,151,012	119,025,657	140,299,742	154,606,868	153,287,351	
161,749	236,890	246,417	269,491	98	20	—	—	21
1,118,136	1,312,207	1,363,027	1,429,456	276,974	636,425	1,416,293	1,398,180	22
8,834,495	9,195,573	9,364,340	9,605,443	2,336,247	2,186,655	3,563,214	2,842,811	
150,547	191,175	323,926	387,124	47,732	34,085	14,549	41,067	23
9,146,791	9,623,638	9,934,683	10,262,058	2,384,077	2,220,760	3,577,763	2,883,878	
168,235	90,289	60,262	69,301	4,808,204	5,306,051	4,408,481	4,413,466	24
—	—	—	—	390,038	921,977	442,715	745,566	25
—	—	—	—	1,594,895	3,781,402	2,088,690	2,754,877	
2,511,429	426,505	562,823	677,556	20,116,756	15,436,530	16,302,665	14,323,059	26
36,247	65,169	40,663	25,088	779,016	1,256,569	1,471,479	1,835,460	27
1,394,979	1,775,640	1,520,531	1,859,897	20,379,298	26,146,489	27,759,569	29,384,265	28
2,006,890	444,208	461,576	124,375	4,171,261	6,881,649	3,105,611	1,640,796	29
119,224	131,272	141,266	185,932	2,583,017	2,320,362	3,147,777	3,627,817	30
110,539	197,544	288,385	150,461	4,229,538	4,801,067	4,178,227	4,143,091	31
15,494,334	12,754,265	13,010,189	13,354,668	61,046,062	68,150,879	66,040,262	65,006,709	
27,960,410	**21,315,590**	**23,724,721**	**26,505,680**	**180,071,719**	**208,450,621**	**220,647,130**	**218,294,060**	

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries 1950	1951	1952	1953
	II. Animals, Fishery, and Animal Products					
1	Animals, living	$	2,249,817	3,166,889	3,552,968	3,632,845
2	Bone, ivory and shell products	$	922,376	1,100,573	960,455	928,361
3	Feathers and quills and manufactures of	$	622,781	802,038	602,364	403,719
	Fishery Products, *n.o.p.*—					
4	Fish, fresh or frozen	$	1,325,872	2,309,562	1,833,027	1,873,801
5	Fish, salted, dried, smoked or pickled	lb.	2,362,425	2,576,317	3,317,003	3,371,974
		$	357,757	380,037	472,259	470,824
6	Fish, canned or preserved, *n.o.p.*	$	1,864,470	2,833,849	2,919,177	3,744,548
7	Other fishery products, *n.o.p.*	$	780,613	901,660	1,040,631	1,430,646
	Totals, Fishery Products, *n.o.p.*	$	4,328,712	6,425,108	6,265,094	7,519,819
8	Furs and manufactures of	$	21,998,958	21,586,369	23,513,823	21,011,727
9	Hairs and bristles and manufactures of	$	2,414,154	3,296,611	1,735,243	2,519,077
10	Hides and skins, raw (except fur skins)	No.	3,334,534	2,715,160	2,138,115	2,122,075
		$	13,250,251	14,211,736	6,151,353	6,893,889
11	Leather, unmanufactured	$	8,396,187	9,413,621	7,618,838	9,218,846
12	Leather, manufactured	$	6,389,230	7,618,333	7,330,476	9,994,223
13	Meats	$	8,392,475	23,509,614	9,723,487	13,100,122
14	Milk and its products	$	3,875,263	13,858,047	7,701,597	2,986,701
15	Oils, fats, greases and waxes	$	8,249,468	9,846,662	2,731,791	3,797,972
16	Other animal products	$	5,877,970	10,726,422	7,652,380	6,219,349
	Totals, Animals, Fishery, and Animal Products	$	**86,967,642**	**125,562,023**	**85,539,869**	**88,226,650**
	III. Fibres and Textiles					
	Cotton and Its Products—					
17	Cotton, raw and unmanufactured	lb.	246,208,448	214,707,322	180,609,739	174,543,746
		$	90,927,016	96,569,667	67,609,703	57,084,800
18	Yarn, thread and cordage	lb.	5,751,452	8,620,429	7,346,219	8,835,130
		$	7,963,543	15,304,761	9,724,564	10,145,550
19	Piece goods (fabrics)	lb.	36,742,289	41,394,177	43,853,849	48,444,349
		$	45,901,357	54,984,071	53,247,824	55,905,850
20	Other cotton products	$	12,652,561	16,290,789	18,613,967	24,369,472
	Totals, Cotton and Its Products	$	157,444,477	183,149,288	149,196,058	147,505,672
21	Flax, hemp, jute and manufactures of	$	25,589,198	31,091,992	23,634,618	21,923,906
22	Silk and manufactures of	$	7,712,259	7,631,573	6,737,895	6,498,282
	Wool and Its Products—					
23	Wool, raw and unmanufactured	lb.	51,302,972	44,586,013	32,449,179	40,441,143
		$	55,305,983	94,809,397	28,919,148	42,748,466
24	Piece goods (fabrics)	lb.	10,496,962	9,647,393	10,061,631	13,194,618
		$	31,719,026	38,566,565	32,212,824	41,742,778
25	Other woollen products	$	20,663,762	29,156,198	20,614,606	31,001,831
	Totals, Wool and Its Products	$	107,688,771	162,532,160	81,746,578	115,493,075
26	Synthetic textile fibre and manufactures of	$	21,299,101	35,452,640	40,128,726	46,586,154
27	Other textile products	$	44,775,025	63,662,729	57,996,142	49,107,837
	Totals, Fibres and Textiles	$	**364,508,831**	**483,520,382**	**359,440,017**	**387,114,926**
	IV. Wood, Wood Products and Paper					
28	Lumber and timber	M ft.	86,174	132,538	151,778	158,783
		$	11,629,216	17,776,625	17,237,513	18,779,872
29	Other wood, unmanufactured	$	6,267,037	10,440,991	10,490,659	11,906,510
30	Wood, manufactured	$	16,546,431	23,084,326	20,396,153	22,699,053
31	Paper and manufactures of	$	23,433,530	34,831,145	29,920,960	39,208,074
32	Books and printed matter	$	42,489,410	50,913,423	56,508,336	68,357,706
	Totals, Wood, Wood Products and Paper	$	**100,365,624**	**137,046,510**	**134,553,621**	**160,951,215**

the United Kingdom and the United States, 1950-53—continued

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
259,514	327,277	248,035	478,920	1,963,128	2,803,224	3,280,507	3,092,693	1
274,192	340,788	328,739	332,178	539,916	622,223	527,795	515,689	2
23,254	48,784	7,865	20,950	413,048	346,518	305,068	218,153	3
512	849	4,797	7,479	1,055,339	1,399,541	1,131,297	1,482,139	4
504,157	586,782	679,832	750,695	223,057	140,342	168,538	193,705	5
69,442	83,577	84,563	104,023	44,771	28,108	33,096	33,864	
36,078	29,763	76,899	57,468	709,317	1,005,629	1,210,054	1,659,401	6
6,989	3,209	2,541	7,210	659,876	691,282	905,949	1,194,021	7
113,021	117,398	168,800	176,180	2,469,303	3,124,560	3,280,396	4,369,425	
755,857	1,914,672	2,033,476	2,255,670	18,946,672	16,794,008	17,408,708	15,872,424	8
18,716	14,547	143,863	240,698	2,259,109	2,873,133	860,756	790,247	9
1,620	30,696	55,711	126,518	2,188,829	1,789,499	1,807,382	1,722,288	10
2,684	77,455	52,299	133,550	9,153,083	9,878,810	5,414,370	6,162,404	
4,787,955	5,372,166	3,536,594	4,470,997	3,341,831	3,417,541	3,915,157	4,408,445	11
2,606,567	3,182,012	2,808,103	3,900,209	2,967,965	3,683,764	3,808,906	5,059,081	12
66,180	545,646	164,745	148,721	4,846,857	15,424,396	4,982,732	8,840,070	13
12,290	13,180	14,702	12,953	377,386	721,330	467,561	352,297	14
258,326	126,971	90,684	688,016	7,826,576	9,508,522	2,395,300	2,656,886	15
543,475	697,187	577,334	588,041	2,134,833	4,347,679	3,048,934	2,888,439	16
9,722,031	**12,778,083**	**10,175,239**	**13,447,083**	**57,239,707**	**73,545,708**	**49,696,190**	**55,226,253**	
74,883	54,862	291,212	578,053	193,939,465	211,276,537	149,134,322	139,936,032	17
19,396	21,470	17,650	214,870	70,774,966	95,178,118	57,737,777	46,449,298	
2,992,754	3,741,346	2,252,327	4,134,135	2,693,678	4,492,970	5,031,139	4,636,144	18
4,057,318	7,676,557	3,557,918	4,948,088	3,804,871	7,062,689	6,047,502	5,076,007	
3,802,758	3,030,389	2,500,994	3,283,244	25,558,436	28,843,776	38,654,984	38,439,102	19
7,616,811	7,203,247	5,203,138	6,546,352	31,056,358	39,418,797	44,897,663	43,837,118	
4,916,544	5,364,333	3,798,144	4,484,349	3,731,146	6,939,534	11,782,875	15,921,775	20
16,610,069	20,265,607	12,576,850	16,193,659	109,367,341	148,599,138	120,465,817	111,284,198	
5,531,431	6,790,943	4,933,563	5,304,147	2,837,657	4,926,107	4,590,662	3,851,399	21
584,131	682,259	460,574	388,029	4,834,055	4,350,497	4,416,215	3,910,279	22
19,651,329	16,304,644	10,016,731	14,074,403	1,740,828	3,736,617	1,882,679	3,410,328	23
29,889,284	43,147,632	12,447,219	20,320,999	2,183,323	6,848,112	1,806,300	3,454,449	
9,585,410	8,305,733	9,257,474	12,266,265	164,712	182,739	275,031	277,070	24
28,320,135	32,699,043	29,417,301	38,424,565	462,672	547,103	694,566	978,906	
14,060,639	20,400,441	14,226,025	20,763,746	1,088,655	1,472,902	1,540,260	2,287,973	25
72,270,058	96,247,116	56,090,545	79,509,310	3,734,650	8,868,117	4,041,126	6,721,328	
5,338,572	5,993,749	5,033,431	4,867,070	11,733,536	20,402,147	29,851,157	35,651,965	26
12,578,894	9,114,459	7,336,671	7,089,876	19,268,675	33,819,535	34,004,486	32,758,675	27
112,913,155	**139,094,133**	**86,431,634**	**113,352,091**	**151,775,914**	**220,965,541**	**197,369,463**	**194,177,844**	
..	..	..	105	82,490	125,688	147,036	150,464	28
2,769	11,684	260	22,935	11,008,024	16,506,994	16,401,435	17,564,336	
2,255	12,925	41,427	3,062	5,990,637	9,689,455	10,105,361	10,506,169	29
408,259	422,694	445,781	799,804	14,253,000	19,664,596	16,672,267	18,653,379	30
1,158,815	1,580,458	1,411,918	1,316,272	22,013,853	32,758,186	28,060,689	37,040,284	31
2,109,667	2,317,197	2,438,747	2,829,592	39,064,032	47,010,383	52,276,802	63,084,018	32
3,681,765	**4,344,958**	**4,338,133**	**4,971,665**	**92,329,546**	**125,629,614**	**123,516,554**	**146,848,186**	

13.—Principal Imports into Canada for Consumption from All Countries,

No.	Item		All Countries			
			1950	1951	1952	1953
	V. Iron and Its Products					
1	Iron ore	ton	3,070,557	3,831,418	4,267,658	4,167,571
		$	16,801,727	22,671,265	26,519,451	28,193,710
2	Ferro-alloys	$	1,352,604	4,259,507	4,318,859	1,420,019
3	Pigs, ingots, blooms and billets	$	3,375,898	11,387,617	12,265,573	3,938,728
4	Scrap iron or steel	$	5,398,014	3,854,606	6,840,473	3,477,794
5	Castings and forgings	$	9,580,131	13,739,383	12,812,225	12,648,809
6	Rolling-mill products	$	93,639,001	173,127,013	143,132,810	124,812,769
7	Tubes, pipes and fittings	$	35,393,818	43,182,776	57,260,868	58,327,482
8	Wire	$	7,127,473	12,303,865	12,217,796	9,457,645
9	Chains	$	3,064,506	4,470,801	4,899,907	4,070,736
10	Engines and boilers	$	54,639,927	88,421,897	136,068,401	116,729,688
11	Farm implements and machinery	$	161,642,021	195,081,777	197,266,261	209,143,129
12	Hardware and cutlery	$	11,782,673	16,899,982	14,345,061	16,202,007
13	Machinery (except agricultural)	$	226,248,681	328,741,288	360,969,466	401,855,756
14	Springs	$	110,698	119,148	242,430	233,670
15	Stamped and coated products	$	8,287,010	10,128,840	9,677,168	11,668,309
16	Tools and hand implements	$	13,483,504	19,117,292	22,565,650	31,003,887
	Vehicles and Parts—					
17	Automobiles, freight	No.	6,770	5,642	4,087	5,103
		$	10,587,697	13,991,589	11,742,706	17,304,400
18	Automobiles, passenger	No.	81,758	42,692	34,906	53,372
		$	75,329,592	56,632,484	49,483,641	79,454,061
19	Automobile parts	$	158,404,838	195,177,254	190,337,126	222,283,607
20	Other vehicles	$	16,779,182	17,309,597	22,362,198	38,207,588
	Totals, Vehicles and Parts	$	261,101,309	283,110,924	273,925,671	357,249,656
21	Other iron and steel products	$	67,200,073	101,633,382	111,298,828	141,121,789
	Totals, Iron and Its Products	$	**980,229,068**	**1,332,251,363**	**1,406,626,898**	**1,531,555,583**
	VI. Non-ferrous Metals					
	Aluminum—					
22	Bauxite	cwt.	37,232,540	48,035,179	49,097,381	53,769,306
		$	9,890,125	15,373,013	12,915,009	16,583,744
23	Aluminum and manufactures of, *n.o.p.*	$	8,825,665	12,698,393	9,725,059	16,577,726
	Totals, Aluminum	$	18,715,790	28,071,406	22,640,068	33,161,470
24	Brass and manufactures of	$	14,491,830	16,422,410	13,429,998	17,795,987
25	Copper and manufactures of	$	2,371,098	4,052,877	10,925,982	9,928,043
26	Lead and manufactures of	$	594,835	786,269	532,388	436,918
27	Nickel and manufactures of	$	6,880,228	6,098,654	5,481,997	7,412,689
28	Precious metals and manufactures of	$	31,398,398	30,208,153	27,645,543	30,859,243
29	Tin and its products	$	10,399,050	19,626,067	10,672,578	8,363,792
30	Zinc and manufactures of	$	3,356,966	4,261,378	2,840,328	3,466,279
31	Alloys, *n.o.p.*	$	1,346,988	2,092,860	1,785,599	1,187,594
32	Clocks and watches	$	12,011,801	10,213,573	9,631,178	13,536,815
33	Electrical apparatus, *n.o.p.*	$	82,564,937	120,101,053	139,567,267	198,275,341
34	Gas apparatus	$	491,349	775,929	552,747	773,581
35	Printing materials	$	2,380,033	2,184,479	1,899,059	2,065,556
36	Other non-ferrous metals	$	28,523,263	45,953,375	49,270,512	37,308,033
	Totals, Non-ferrous Metals	$	**215,526,566**	**290,848,483**	**296,875,244**	**364,571,341**
	VII. Non-metallic Minerals					
37	Asbestos and manufactures of	$	2,631,352	3,428,453	3,398,361	3,310,175
38	Clay and manufactures of	$	33,699,110	43,403,839	37,483,324	40,559,444
	Coal and Its Products—					
39	Coal, anthracite	ton	4,286,383	3,853,431	3,894,863	2,989,054
		$	54,285,320	51,244,639	49,433,409	40,088,265
40	Coal, bituminous and coal, *n.o.p.*	ton	22,668,440	22,947,974	21,037,990	20,276,487
		$	120,478,811	116,844,809	101,236,846	96,479,188
41	Coke	ton	642,254	956,755	825,259	656,259
		$	11,029,927	16,911,483	13,464,933	11,565,770
42	Other coal products	$	4,552,299	5,367,309	4,068,257	5,089,685
	Totals, Coal and Its Products	$	190,346,357	190,368,240	168,203,445	153,222,908

the United Kingdom and the United States, 1950-53—continued

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
11	—	11	—	2,975,659	3,690,269	4,106,737	4,008,810	**1**
643	—	586	—	15,971,317	21,329,066	24,196,991	25,705,847	
53,651	16,097	233,007	65,257	706,657	2,935,699	2,929,219	1,297,717	**2**
224,533	2,343	273	33,191	2,714,998	10,493,226	12,253,425	3,307,713	**3**
88	23,925	561	728	2,257,089	3,221,800	6,463,791	2,253,879	**4**
3,065,590	5,214,799	4,583,922	3,948,505	6,491,038	8,486,671	7,779,767	8,383,088	**5**
13,956,804	19,926,906	13,679,216	15,156,653	73,930,035	120,308,700	105,660,277	99,930,686	**6**
5,737,243	9,712,871	10,434,660	9,904,859	29,388,650	31,470,258	44,666,910	45,471,839	**7**
2,436,907	2,933,122	2,605,180	2,876,328	4,664,157	8,900,762	9,244,241	6,121,529	**8**
384,881	613,034	720,188	532,344	2,665,384	3,819,233	4,131,453	3,405,466	**9**
6,711,083	8,692,858	10,965,873	19,468,251	47,833,732	79,566,355	124,839,820	96,643,373	**10**
8,694,520	6,877,118	6,400,701	5,440,814	152,576,162	187,581,155	190,122,002	202,780,530	**11**
2,261,610	2,317,343	1,879,922	2,902,693	8,404,167	12,271,447	10,666,683	11,042,021	**12**
17,277,251	21,373,473	33,533,249	46,784,124	204,984,479	296,978,195	314,085,222	339,052,657	**13**
3,144	19,248	5,446	14,243	107,554	99,900	235,941	216,474	**14**
389,189	517,107	342,838	461,634	7,801,886	9,278,468	9,119,524	10,854,225	**15**
1,641,727	2,664,520	2,983,767	3,492,231	10,897,049	14,900,400	17,313,990	25.099.239	**16**
5,173	2,267	1,057	855	1,587	3,375	2,996	3,938	**17**
4,824,792	2,405,202	1,114,046	1,286,521	5,756,886	11,586,387	10,591,121	15,690,026	
77,666	28,518	20,748	28,141	3,183	14,105	14,053	23,687	**18**
68,366,135	26,506,824	19,637,203	28,475,498	6,337,796	30,077,048	29,734,701	49,554,083	
4,232,470	5,760,199	3,693,936	4,246,390	154,107,515	189,341,446	186,556,394	217,809,816	**19**
3,186,381	2,899,296	1,970,276	6,728,952	13,276,687	13,985,787	20,142,949	31,139,400	**20**
80,609,778	37,571,521	26,415,461	40,737,361	179,478,884	244,990,668	247,025,165	314,193,325	
5,401,273	8,077,071	7,753,815	9,720,976	60,134,549	90,212,316	100,066,764	128,896,174	**21**
148,849,915	**126,553,356**	**122,538,665**	**161,540,192**	**811,007,787**	**1,146,844,319**	**1,230,801,185**	**1,324,655,782**	
—	—	—	—	1,819,401	2,792,244	1,758,157	1,353,164	**22**
—	—	—	—	2,239,082	3,149,235	1,485,043	1,618,710	
1,053,418	1,948,806	1,158,941	3,922,476	7,351,214	10,109,553	8,156,809	12,548,423	**23**
1,053,418	1,948,806	1,158,941	3,922,476	9,590,296	13,258,788	9,641,852	14,167,133	
818,572	843,496	731,671	1,171,547	13,522,765	15,352,644	12,367,644	16,296,439	**24**
219,828	436,778	283,556	1,546,197	2,092,066	2,938,860	10,630,311	4,230,502	**25**
47,605	211,476	275,478	135,795	273,630	245,229	206,227	245,919	**26**
435,890	496,528	399,425	336,885	6,093,227	5,236,512	4,526,170	6,379,799	**27**
22,324,474	18;284,492	18,191,385	17,471,716	8,324,307	10,512,169	9,038,780	12,591,823	**28**
1,923,106	2,515,464	646,139	1,059,833	1,091,922	5,113,020	906,091	181,486	**29**
41,244	48,741	15,022	48,125	3,257,369	4,123,946	2,744,457	3,375,216	**30**
389,117	545,040	429,283	374,701	928,566	1,541,081	1,308,404	786,217	**31**
183,399	331,395	374,806	292,577	4,691,385	3,987,431	3,094,797	4,096,199	**32**
9,284,924	14,669,101	18,050,315	22,557,492	71,644,630	103,560,737	118,822,867	172,292,968	**33**
9,458	8,525	13,522	25,428	453,864	707,473	534,719	738,027	**34**
75,009	89,044	40,788	59,796	2,297,961	2,083,692	1,851,636	1,992,454	**35**
1,514,753	2,192,032	2,592,521	2,988,003	11,423,590	24,165,026	22,365,276	23,970,030	**36**
38,320,797	**42,620,918**	**43,202,852**	**51,990,571**	**135,685,578**	**192,826,608**	**198,039,231**	**261,344,212**	
386,941	635,049	534,648	413,389	2,226,629	2,706,742	2,795,749	2,860,994	**37**
13,576,865	16,933,548	13,490,607	14,133,903	18,887,335	24,418,877	22,482,782	24,619,175	**38**
395,867	291,656	344,743	338,861	3,890,254	3,561,775	3,550,120	2,650,193	**39**
4,702,789	3,397,935	4,382,614	4,662,312	49,580,505	47,846,704	45,050,795	35,425,953	
28,007	—	11,289	13,522	22,640,395	22,947,920	21,026,701	20.262,965	**40**
272,370	—	105,351	125,090	120,205,703	116,843,834	101,131,495	96,354,098	
201	1	24	186	642,053	956,737	825,235	656,073	**41**
3,103	44	588	4,979	11,026,824	16,910,494	13,464,345	11,560,791	
758,685	662,421	367,697	1,170,385	3,688,377	4,362,340	3,696,434	2,743,696	**42**
5,736,947	4,060,400	4,856,250	5,962,766	184,501,409	185,963,372	163,343,069	147,084,538	

13.—Principal Imports into Canada for Consumption from All Countries'

No.	Item		All Countries			
			1950	1951	1952	1953
	VII. Non-metallic Minerals—concluded					
1	Glass and manufactures of	$	28,150,003	31,768,775	27,049,456	37,423,611
2	Graphite and its products	$	566,024	788,533	745,737	824,788
3	Mica and manufactures of	$	757,825	976,467	728,889	719,544
	Petroleum, Asphalt and Products—					
4	Petroleum, crude	M gal.	2,804,519	2,948,512	2,896,508	2,857,130
		$	204,135,857	233,363,537	210,265,558	213,286,105
5	Fuel oil for ships' stores	gal.	10,695,294	14,258,112	15,598,798	18,796,458
		$	442,869	679,982	692,812	940,737
6	Coal oil and kerosene	gal.	15,722,711	18,971,434	33,814,292	26,708,398
		$	1,855,875	2,321,563	4,013,338	3,256,297
7	Gasoline	gal.	246,462,585	202,565,570	250,206,488	291,608,276
		$	39,759,478	33,395,830	39,123,900	48,622,821
8	Lubricating oils	gal.	17,710,328	28,898,979	31,301,602	34,947,510
		$	5,315,068	9,946,077	9,068,545	9,046,270
9	Other petroleum and asphalt products	$	56,453,374	74,186,674	78,798,296	82,897,096
	Totals, Petroleum, Asphalt and Products.	$	307,962,521	353,893,663	341,962,449	358,049,326
10	Stone and its products	$	24,620,481	33,965,946	36,147,439	35,642,188
11	Other non-metallic minerals	$	23,007,754	25,941,420	26,165,595	28,723,596
	Totals, Non-metallic Minerals	$	**611,741,427**	**684,535,336**	**641,884,695**	**658,475,580**
	VIII. Chemicals and Allied Products					
12	Acids	$	5,613,559	7,541,211	5,938,509	6,991,334
13	Alcohols, industrial	$	880,171	1,227,877	1,109,316	1,403,722
14	Cellulose products	$	6,233,519	7,226,520	2,555,137	1,067,162
15	Drugs, medicinal and pharmaceutical products	$	18,629,297	22,427,117	21,780,213	22,417,251
16	Dyeing and tanning materials	$	12,907,549	13,759,164	10,023,151	11,167,457
17	Explosives	$	1,385,735	1,652,679	2,247,146	1,997,394
18	Fertilizers	cwt.	7,446,737	8,223,278	9,273,758	10,062,743
		$	8,792,439	10,234,838	10,465,092	11,989,622
19	Paints, pigments and varnishes	$	18,211,825	20,861,237	17,213,669	21,199,445
20	Perfumery, cosmetics and toilet preparations.	$	357,674	646,619	904,186	1,445,102
21	Soap, common laundry	lb.	2,376,681	2,232,190	1,870,190	1,229,484
		$	286,664	316,397	224,947	149,055
22	Soap, other	$	569,185	571,216	575,955	796,262
	Inorganic Chemicals, *n.o.p.*—					
23	Alum and compounds of aluminum and iron	cwt.	107,653	213,747	233,455	332,444
		$	291,149	535,929	535,363	700,991
24	Ammonia and its compounds	lb.	20,944,861	15,768,181	26,226,535	24,992,787
		$	817,977	647,273	1,042,442	1,060,625
25	Compounds of antimony, arsenic, copper, tin and zinc	lb.	3,867,857	2,914,051	9,508,205	6,862,779
		$	284,446	293,347	1,084,824	669,003
26	Potash and potassium compounds, *n.o.p.*	lb.	8,311,341	9,504,604	7,864,429	8,834,097
		$	815,015	1,028,463	783,239	829,179
27	Soda and sodium compounds, *n.o.p.*	lb.	234,391,731	365,832,915	316,686,013	562,601,076
		$	9,154,542	11,497,777	9,443,862	14,009,916
28	Other inorganic chemicals	$	11,673,211	12,790,185	12,826,243	14,501,858
	Totals, Inorganic Chemicals, *n.o.p.*	$	23,036,340	26,792,974	25,715,973	31,771,572
29	Other chemicals and allied products	$	61,317,098	78,555,098	88,959,783	109,438,867
	Totals, Chemicals and Allied Products.	$	**158,221,055**	**191,812,947**	**187,713,077**	**221,834,245**
	IX. Miscellaneous Products					
30	Amusement and sporting goods, *n.o.p.*	$	11,507,730	15,881,079	17,642,564	23,068,781
31	Brushes	$	993,686	1,280,870	1,135,464	1,397,950
32	Containers, *n.o.p.*	$	5,821,110	7,628,265	7,672,760	8,787,495
33	Household and personal equipment	$	26,852,160	44,908,354	60,340,934	76,044,533
34	Mineral and aerated waters	$	86,611	103,049	138,710	169,715
35	Musical instruments	$	3,861,103	4,738,636	4,986,268	6,878,997
36	Scientific and educational equipment	$	23,161,004	27,010,665	26,434,209	29,722,893
37	Ships and vessels	$	1,658,036	2,729,617	3,620,012	1,682,265
38	Vehicles (except iron)	$	13,140,045	44,454,932	101,552,426	120,645,098
39	Works of art	$	2,471,515	3,262,143	2,527,969	2,552,288
40	Miscellaneous imports under special conditions	$	48,528,968	81,969,796	121,655,529	126,998,752
41	Other miscellaneous commodities	$	34,135,626	62,670,859	80,935,009	83,783,980
	Totals, Miscellaneous Products	$	**172,217,594**	**296,638,265**	**428,641,854**	**481,732,747**
	Grand Totals, Imports for Consumption.	$	**3,174,253,138**	**4,084,856,478**	**4,030,467,653**	**4,382,830,430**

the United Kingdom and the United States, 1950-53—concluded

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
6,065,878	6,321,195	3,776,478	5,184,940	18,375,666	20,449,504	19,640,089	26,433,572	1
90,905	102,867	135,678	141,609	422,864	608,711	535,721	580,806	2
37,741	32,487	20,342	16,021	474,724	544,948	438,697	472,004	3
—	—	—	—	1,094,514	760,522	711,995	510,315	4
—	—	—	—	90,278,634	59,811,632	54,635,919	40,702,895	
—	—	—	—	10,695,294	14,258,112	15,598,798	18,796,458	5
—	—	—	—	442,869	679,982	692,812	940,737	
—	226	—	281	11,388,660	15,631,880	27,970,000	24,729,736	6
—	556	—	84	1,389,949	1,952,184	3,242,686	3,018,590	
—	—	—	—	204,115,317	182,233,536	210,402,995	272,159,401	7
—	—	—	—	32,827,557	30,271,192	32,777,759	45,429,430	
29,794	26,570	32,499	86,264	17,655,339	28,822,084	31,211,612	34,808,089	8
21,722	21,181	48,606	73,133	5,268,208	9,877,788	8,966,675	8,929,061	
64,121	10,662	30,414	44,824	39,436,646	55,433,578	64,313,862	66,756,257	9
85,843	32,399	79,020	118,041	169,643,863	158,026,356	164,629,713	165,776,970	
2,734,153	3,472,013	3,200,523	2,781,952	19,946,539	24,398,739	26,009,135	27,410,908	10
1,486,543	1,274,082	1,224,661	1,401,801	16,379,875	18,738,703	19,577,962	20,465,388	11
30,201,816	**32,864,040**	**27,318,207**	**30,154,422**	**430,858,904**	**435,855,952**	**419,452,917**	**415,704,355**	
959,517	1,361,730	635,840	628,228	4,332,341	5,473,182	4,960,413	5,718,956	12
1,147	1,672	—	4,903	872,802	1,216,530	1,100,333	1,388,040	13
818,013	912,857	162,921	—	5,363,212	6,094,769	2,276,155	1,067,162	14
1,664,666	1,681,080	1,781,054	1,790,454	16,178,810	19,619,856	18,605,060	19,133,069	15
1,721,531	1,853,528	1,308,467	1,380,019	8,370,078	8,380,411	6,150,837	6,518,012	16
376,679	88,266	103,950	126,841	920,590	1,464,984	2,036,834	1,729,141	17
4,558	8,783	7,504	15,142	6,251,275	7,537,072	8,041,436	8,427,446	18
4,321	18,561	25,263	45,569	6,846,050	9,002,585	8,676,074	9,521,716	
2,526,380	2,922,200	2,251,514	4,169,062	15,582,991	17,703,783	14,868,688	16,881,337	19
107,930	67,106	54,764	97,077	95,722	406,153	650,760	1,074,173	20
86,362	21,320	864	13,708	2,215,513	2,209,770	1,869,326	1,208,044	21
14,334	2,700	130	1,273	260,041	313,433	224,817	147,040	
124,422	110,648	77,241	103,750	429,498	433,011	473,908	661,887	22
59,726	154,558	90,857	148,749	47,705	58,529	140,130	178,201	23
100,557	260,699	171,250	263,677	189,953	272,730	357,970	425,928	
929,073	2,021,396	872,627	1,154,767	19,999,112	13,701,523	25,329,015	23,679,906	24
57,754	109,556	49,858	67,689	757,505	531,885	990,265	977,845	
2,614,975	628,220	810,994	3,599,514	912,242	1,544,895	4,171,065	3,258,855	25
145,782	56,013	53,552	279,499	111,439	174,519	401,077	387,204	
967,649	1,068,416	662,513	605,308	6,001,219	7,301,965	128,876	6,160,227	26
148,868	175,420	128,876	114,868	528,046	698,416	524,944	521,051	
78,559,769	134,301,269	32,929,312	139,468,421	151,302,152	226,754,416	279,888,987	415,433,985	27
2,092,723	2,992,526	1,538,742	3,089,850	6,557,852	7,971,541	7,429,119	10,125,793	
390,665	351,132	268,107	267,333	11,100,983	12,238,955	12,481,946	14,078,112	28
2,936,349	3,945,346	2,210,385	4,082,916	19,245,778	21,888,046	22,185,321	26,515,933	
2,791,754	3,222,445	3,613,485	6,120,558	56,105,095	73,064,114	84,039,628	101,455,763	29
14,047,043	**16,188,139**	**12,225,014**	**18,559,650**	**134,603,008**	**165,060,857**	**166,248,828**	**191,812,229**	
2,465,298	2,700,209	2,857,753	3,441,819	7,084,026	11,146,526	12,716,955	16,319,621	30
362,517	613,471	340,385	375,606	598,409	587,742	717,152	867,053	31
2,018,007	2,574,429	2,580,607	2,975,859	2,551,669	3,086,074	3,256,762	3,475,879	32
3,672,222	3,436,383	2,678,858	3,355,898	21,446,243	39,435,901	55,586,357	69,259,210	33
5,931	3,233	6,196	5,056	12,241	18,837	19,123	10,235	34
458,590	516,043	643,220	820,672	2,532,414	3,263,130	3,194,431	4,661,308	35
1,285,188	1,336,808	2,081,476	1,786,202	20,284,738	23,370,006	21,731,337	24,540,956	36
157,581	268,844	283,055	516,050	1,232,710	2,101,916	3,265,887	860,019	37
1,885,123	3,078,854	4,489,922	7,701,318	11,245,627	41,067,444	96,832,517	112,711,249	38
866,620	1,030,126	992,178	782,482	737,152	838,508	731,507	944,207	39
2,209,224	3,010,066	6,011,930	3,975,837	44,888,485	77,456,279	113,993,599	120,139,975	40
3,130,216	6,656,832	6,837,078	7,142,235	24,290,052	41,375,715	59,145,207	59,361,783	41
18,516,517	**25,225,298**	**29,802,658**	**32,879,034**	**136,903,766**	**243,748,078**	**371,190,834**	**413,151,495**	
404,213,449	**420,984,515**	**359,757,123**	**453,391,388**	**2,130,475,929**	**2,812,927,298**	**2,976,962,332**	**3,221,214,416**	

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1950	1951	1952	1953
	I. Agricultural and Vegetable Products					
	A. MAINLY FOOD					
	Fruits—					
1	Fruits, fresh	$	14,456,267	12,690,751	12,738,033	12,609,893
2	Fruits, dried	lb.	677,406	35,864	125,152	3,223
		$	116,686	7,905	3,251	701
3	Fruits, canned or preserved	lb.	3,890,845	3,413,137	3,146,997	3,681,853
		$	586,489	574,189	554,101	634,214
4	Fruit juices and fruit syrups	gal.	213,328	219,201	212,153	121,404
		$	176,275	220,851	252,926	165,765
	Totals, Fruits	$	15,335,717	13,493,696	13,548,311	13,410,573
5	Nuts	$	7,027	20,668	9,547	9,884
	Vegetables—					
6	Vegetables, fresh	$	6,131,526	6,658,029	6,036,661	5,852,023
7	Vegetables, dried	lb.	29	494	614	923
		$	38	449	517	688
8	Vegetables, canned	lb.	22,652,053	33,762,337	10,987,663	9,398,503
		$	2,116,079	3,706,456	1,364,468	1,104,572
9	Pickles, sauces and catsups	$	140,530	185,185	89,118	61,215
	Totals, Vegetables	$	8,388,173	10,550,119	7,490,764	7,018,498
	Grains and Farinaceous Products—					
10	Wheat	bu.	162,993,750	237,060,505	336,023,883	290,073,264
		$	325,613,570	441,042,753	621,292,402	567,906,882
11	Flour of wheat	bbl.	10,095,002	12,078,671	13,246,269	11,144,214
		$	93,838,590	113,854,397	116,054,531	102,160,443
12	Prepared foods and bakery products	$	641,550	1,230,371	907,759	1,316,589
13	Other farinaceous products	$	69,267,348	154,064,803	260,639,226	242,902,343
	Totals, Grains and Farinaceous Products	$	489,361,058	710,192,324	998,893,918	914,286,257
14	Oils, vegetable, for food	cwt.	7,572	768	816	219
		$	92,319	22,988	20,121	4,617
	Sugar and Its Products—					
15	Confectionery, including candy	$	123,688	234,762	196,410	335,776
16	Maple sugar	lb.	6,648,661	5,825,723	8,635,730	8,805,982
		$	2,914,133	2,435,438	3,320,180	3,748,775
17	Other sugar and products	$	3,184,198	1,833,729	2,369,131	2,046,675
	Totals, Sugar and Its Products	$	6,222,019	4,503,929	5,885,721	6,131,226
18	Cocoa and chocolate	$	145,989	294,604	24,436	9,484
19	Coffee and chicory	$	14,008	93,228	33,551	1,456,975
20	Spices	$	18,487	12,191	9,429	8,480
21	Tea	$	219,034	132,377	185,659	243,343
22	Other vegetable products	$	703,110	972,084	1,005,974	875,451
	TOTALS, A. MAINLY FOOD	$	520,506,941	740,288,208	1,027,107,431	943,454,788
	B. OTHER THAN FOOD					
	Beverages, Alcoholic—					
23	Ale, beer and porter	gal.	1,554,726	2,023,974	1,805,010	2,183,358
		$	1,669,153	2,222,475	2,134,700	2,897,269
24	Whisky and other distilled beverages	pf. gal.	4,762,280	6,198,627	6,345,247	7,376,492
		$	41,829,005	54,236,588	54,457,453	63,317,067
25	Wines	gal.	6,320	2,154	3,051	2,770
		$	8,479	3,681	5,258	4,810
	Totals, Beverages, Alcoholic	$	43,506,637	56,462,744	56,597,411	66,219,146
26	Gums and resins	$	39,644	72,073	71,107	51,481
27	Oil cake and oil cake meal	cwt.	765,247	1,122,000	1,077,694	2,191,328
		$	2,568,123	3,916,418	4,822,439	8,221,621
28	Oils, vegetable, not food	$	3,709,649	3,625,867	4,033,372	4,774,902
29	Plants, shrubs, trees and vines	$	113,239	120,542	124,624	170,460
30	Rubber and manufactures of	$	12,153,417	29,067,215	17,690,727	8,334,309

the United Kingdom and the United States, 1950-53

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
3,680,760	1,900,464	1,581,436	—	10,532,247	10,351,424	10,628,969	12,092,447	1
—	—	—	—	630,544	31,280	122,987	739	2
—	—	—	—	108,404	6,347	2,750	169	
16,651	29,847	26,918	16,690	3,458,731	2,927,905	2,667,573	3,270,948	3
5,696	12,123	6,867	4,864	505,671	466,975	464,750	558,762	
—	—	—	—	210,356	167,520	100,856	40,704	4
—	—	—	—	168,553	148,587	99,321	55,866	
3,686,456	1,912,587	1,588,303	4,864	11,314,875	10,973,333	11,195,790	12,707,244	
—	—	—	—	—	577	508	15	5
—	—	—	—	4,688,193	4,981,505	5,286,176	4,563,689	6
—	—	—	25	13	27	302	600	7
—	—	—	25	16	26	273	454	
4,644,276	8,357,948	5,984,765	6,099,957	13,695,570	20,994,355	497,981	241,636	8
416,691	872,103	638,967	639,166	1,122,056	2,190,798	60,528	20,171	
9,576	19,106	13,712	14,468	12,033	26,462	3,032	12,135	9
426,267	891,209	652,679	653,659	5,822,298	7,198,791	5,350,009	4,596,449	
86,967,949	85,742,135	103,529,484	103,641,307	14,951,226	37,916,746	44,082,487	12,924,462	10
173,650,751	159,179,214	189,575,022	206,390,806	28,485,785	65,036,229	72,533,242	23,693,726	
4,349,704	4,792,478	4,870,147	3,883,279	91,668	200,188	15,268	52,271	11
40,962,695	43,005,246	39,265,294	33,359,001	669,813	1,586,558	127,235	404,107	
1,588	3,922	2,348	24,372	311,302	813,852	444,407	338,495	12
481,643	8,987,088	2,766,622	40,426,114	55.603,035	88,389,954	119,601,424	126,738,883	13
215,096,677	211,175,470	231,609,286	280,200,293	85,069,935	155,826,593	192,706,308	151,175,211	
—	—	—	—	652	376	39	19	14
—	—	—	—	7,369	10,559	673	250	
15,182	30,733	21,451	51,471	33,687	43,292	42,577	123,590	15
—	—	—	1,875	6,576,136	5,824,539	8,633,823	8,795,360	16
—	—	—	687	2,880,651	2,434,882	3,319,385	3,743,788	
—	—	—	577	1,842,161	1,717,675	1,878,719	1,883,454	17
15,182	30,733	21,451	52,735	4,756,499	4,195,849	5,240,681	5,750,832	
—	—	—	4,235	76,234	10,086	20,941	2,692	18
—	—	—	—	103	75,969	967	1,438,463	19
—	—	—	—	3,904	2,676	1,190	291	20
—	—	—	—	167,124	127,947	182,488	241,561	21
6,608	5,712	10,531	5,136	259,156	278,121	218,785	204,441	22
219,231,190	214,015,711	233,882,250	280,920,922	107,477,497	178,700,501	214,918,340	176,117,449	
—	—	—	—	1,528,618	1,776,864	1,620,120	2,050,932	23
—	—	—	—	1,638,142	1,951,738	1,923,866	2,746,680	
55,190	102,764	129,456	174,715	3,708,215	4,891,567	4,968,425	5,975,851	24
377,611	639,527	782,359	918,552	33,521,556	44,207,395	44,276,091	53,222,482	
—	—	—	—	2,852	2	20	17	25
—	—	—	—	3,564	52	96	57	
377,611	639,527	782,359	918,552	35,163,262	46,159,185	46,200,053	55,969,219	
17,078	43,504	21,272	15,922	18,502	15,400	37,586	24,081	26
—	228,480	—	1,442,549	498,769	576,547	964,528	607,273	27
—	861,079	—	5,268,567	1,669,839	1,860,357	4,303,649	2,431,779	
—	—	460,456	2,935,916	461,317	493,884	394,083	520,021	28
22,423	14,624	13,156	10,880	89,174	104,156	110,219	158,372	29
418,271	1,884,770	414,793	203,694	4,376,316	6,646,934	5,521,065	4,497,897	30

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1950	1951	1952	1953
	I. Agricultural and Vegetable Products—concluded					
	B. OTHER THAN FOOD—concluded					
1	Seed potatoes	bu.	4,894,177	3,837,545	2,256,189	3,390,868
		$	5,237,405	4,086,204	6,364,126	6,612,655
2	Seeds, *n.o.p.*	$	25,474,285	23,829,089	26,780,975	24,179,567
3	Tobacco, unmanufactured	lb.	22,508,262	29,180,473	38,315,173	28,389,217
		$	10,551,660	16,413,373	22,221,125	15,682,664
4	Tobacco, manufactured	$	90,959	206,746	389,151	444,675
5	Other vegetable products, not food	$	12,945,864	16,121,251	17,293,930	18,616,706
	TOTALS, B. OTHER THAN FOOD	$	116,390,882	153,921,522	156,388,987	153,308,186
	Totals, Agricultural and Vegetable Products	$	**636,897,823**	**891,209,730**	**1,183,496,418**	**1,096,762,974**
	II. Animals, Fishery, and Animal Products					
	Animals, Living—					
6	Cattle, swine, sheep and poultry, pure bred for improvement of stock	$	7,834,215	8,345,138	1,157,852	6,136,434
7	Cattle, *n.o.p.*	No.	435,239	219,563	12,537	49,155
		$	71,651,067	55,027,616	3,139,181	9,150,680
8	Horses	No.	26,858	11,072	6,996	12,563
		$	1,002,325	557,329	358,167	615,697
9	Other animals, living	$	4,084,523	1,348,166	1,163,968	1,352,769
	Totals, Animals, Living	$	84,572,130	65,278,249	5,819,168	17,255,580
10	Bones, horns, etc	$	352,989	367,154	122,027	320,520
	Fishery Products, *n.o.p.*—					
11	Fish, fresh or frozen	cwt.	2,947,048	2,815,073	3,083,326	2,990,198
		$	62,411,981	66,274,959	67,924,242	66,632,848
12	Fish, salted, dried, pickled and smoked	cwt.	2,083,745	2,100,536	1,844,168	1,633,654
		$	28,628,118	27,607,811	25,543,823	22,273,695
13	Fish, canned or preserved, *n.o.p.*	cwt.	477,168	478,504	490,173	598,154
		$	15,248,687	16,192,679	13,986,347	18,373,822
14	Other fishery products, *n.o.p.*	$	6,429,049	7,388,996	5,870,355	3,853,912
	Totals, Fishery Products, *n.o.p*	$	112,717,835	117,464,445	113,324,767	111,134,277
15	Furs and manufactures of	$	25,298,256	29,864,201	24,405,531	22,340,616
16	Hair and bristles and manufactures of	$	1,318,813	2,424,048	1,312,381	1,192,960
17	Hides and skins, raw (except fur skins)	No.	2,149,127	1,609,314	1,631,268	2,035,233
		$	14,409,710	13,791,138	5,534,442	7,568,957
18	Leather, unmanufactured	$	6,035,152	7,014,585	4,455,148	6,790,639
19	Leather, manufactured	$	1,912,636	2,151,633	2,177,394	2,725,791
20	Bacon and hams, shoulders and sides	cwt.	785,267	61,325	35,393	70,274
		$	28,306,976	3,649,744	2,502,016	5,508,128
21	Other meats and preparations of	$	46,211,060	68,812,411	46,061,361	46,521,396
	Milk and Its Products—					
22	Butter	cwt.	16,291	5,437	8,656	1,907
		$	943,042	387,404	568,833	125,798
23	Cheese	cwt.	631,096	306,532	20,949	164,294
		$	16,551,508	10,231,725	879,546	4,518,175
24	Milk, processed	cwt.	557,644	410,406	686,782	573,847
		$	9,171,452	9,011,843	13,237,392	10,621,890
25	Other milk products	$	915,808	1,867,632	1,004,519	934,396
	Totals, Milk and Its Products	$	27,581,810	21,498,604	15,690,290	16,200,259
26	Oils, fats, greases and waxes	$	5,455,367	6,522,462	5,256,159	3,622,438
27	Other animal products	$	11,602,304	9,194,796	11,280,843	9,737,419
	Totals, Animals, Fishery, and Animal Products	$	**365,775,038**	**348,033,470**	**237,941,527**	**250,918,980**

the United Kingdom and the United States, 1950-53—continued

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
—	—	—	—	3,881,329	3,061,810	1,284,301	2,053,313	**1**
—	—	—	—	3,966,402	3,003,288	3,486,728	3,751,632	
254,470	320,124	2,165,008	1,876,852	11,961,110	11,734,055	10,233,359	10,683,664	**2**
15,766,400	23,223,062	31,927,373	23,282,564	122	135	10	82	**3**
8,320,337	13,491,339	18,601,170	12,905,136	196	113	12	128	
17	308	55,538	102,905	49,691	43,896	34,437	34,111	**4**
153,827	313,788	62,383	143,112	11,703,607	14,680,791	16,067,331	17,109,232	**5**
9,564,034	17,569,063	22,576,135	24,381,536	69,459,416	84,742,059	86,388,522	95,180,136	
228,795,224	**231,584,774**	**256,458,385**	**305,302,458**	**176,936,913**	**263,442,560**	**301,306,862**	**271,297,585**	
145	250	—	—	7,322,754	7,975,275	920,439	5,720,041	**6**
—	—	—	—	433,992	218,607	11,763	47,677	**7**
—	—	—	—	71,516,369	54,873,719	3,060,420	9,017,031	
4	—	—	—	26,788	10,964	6,927	12,422	**8**
2,800	—	—	—	990,873	544,408	349,570	576,972	
3,640	2,726	11,974	20,094	4,036,778	1,300,593	1,069,144	1,254,652	**9**
6,585	2,976	11,974	20,094	83,866,774	64,693,995	5,399,573	16,568,696	
—	15,400	—	—	350,880	351,502	121,845	278,621	**10**
—	—	—	—	2,941,058	2,804,321	3,064,849	2,964,578	**11**
—	—	—	—	62,217,984	65,969,421	67,446,622	65,979,634	
—	—	—	—	481,782	476,334	467,300	392,791	**12**
—	—	—	—	6,884,616	6,700,901	6,669,971	5,497,486	
127,794	169,643	14,782	128,945	39,650	32,573	143,363	152,538	**13**
4,891,776	7,043,534	761,539	4,646,857	2,944,225	2,126,404	5,513,058	6,072,136	
86,325	128,290	1,850	43,056	6,152,805	7,066,840	5,655,509	3,562,586	**14**
4,978,101	7,171,824	763,389	4,689,913	78,199,630	81,863,566	85,285,160	81,111,842	
4,009,635	7,325,579	4,052,900	3,896,948	20,807,744	21,834,659	19,742,138	17,808,914	**15**
338,409	1,018,317	492,342	429,952	794,887	1,291,866	700,697	632,164	**16**
156,150	188,062	84,388	131,464	1,659,415	1,354,170	1,460,490	1,575,373	**17**
1,109,158	1,291,814	214,937	452,902	9,231,712	11,820,419	4,702,112	4,642,635	
858,331	1,254,006	1,191,049	1,725,696	3,134,683	3,819,979	2,213,447	3,166,598	**18**
91,460	117,711	54,770	113,107	1,631,947	1,606,386	1,788,558	2,249,222	**19**
723,403	18,915	—	—	52,817	34,997	25,595	60,970	**20**
24,400,029	629,559	—	—	3,406,398	2,567,150	1,978,978	4,951,312	
904	447,349	28,244,712	2,640,169	40,686,259	63,900,286	13,138,843	38,186,379	**21**
—	—	—	—	417	1,465	2,234	220	**22**
—	—	—	—	27,494	112,706	174,226	17,158	
592,398	271,517	1,483	148,051	30,231	27,257	15,462	10,716	**23**
15,072,739	8,718,302	47,641	3,868,688	1,187,400	1,188,436	673,871	450,245	
—	54,639	—	—	31,070	3,366	130,835	21,406	**24**
—	712,552	—	—	330,625	44,451	1,640,021	252,037	
—	—	—	—	344,058	493,864	156,309	491,685	**25**
15,072,739	9,430,854	47,641	3,868,688	1,889,577	1,839,457	2,644,427	1,211,125	
59,968	939,462	322,302	175,948	2,328,663	2,759,893	2,344,298	1,550,146	**26**
2,420,866	215,112	552,279	567,318	7,003,717	7,178,538	7,905,889	7,014,549	**27**
53,346,185	**29,859,963**	**35,948,295**	**18,580,735**	**253,332,871**	**265,527,696**	**147,965,965**	**179,372,203**	

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1950	1951	1952	1953
	III. Fibres and Textiles					
1	Cotton and manufactures of	$	7,151,961	10,960,752	7,041,833	3,374,395
2	Flax, hemp, jute and manufactures of	$	2,004,574	1,234,434	1,386,542	564,914
3	Silk and manufactures of	$	6,763	763	1,385	6,201
4	Wool, raw (includes noils and tops)	lb.	3,756,947	2,326,790	3,170,992	3,436,268
		$	2,480,077	2,201,134	1,937,985	1,899,138
5	Other wool and manufactures of	$	3,817,812	5,295,801	2,525,060	3,870,420
6	Synthetic fibre and manufactures of	$	5,118,279	4,267,695	3,227,236	5,210,303
7	Other textile products	$	8,993,984	12,897,765	11,576,770	9,407,842
	Totals, Fibres and Textiles	$	**29,573,450**	**36,858,344**	**27,696,811**	**24,333,213**
	IV. Wood, Wood Products and Paper					
8	Logs	M ft.	57,029	43,063	52,228	47,621
		$	4,308,117	4,707,423	4,796,034	4,394,811
9	Railroad ties	No.	451,139	168,478	899,632	1,494,293
		$	1,322,244	480,609	3,345,857	4,497,341
10	Planks and boards	M ft.	3,575,322	3,435,510	3,328,563	3,369,686
		$	290,846,700	312,198,092	295,948,736	282,736,266
11	Timber, square	M ft.	3,330	3,868	11,095	11,909
		$	274,390	424,919	1,256,318	1,012,840
12	Shingles	squares	2,923,892	2,588,360	2,112,826	2,071,338
		$	32,400,879	27,482,820	20,002,127	20,913,175
13	Pulpwood	$	34,767,878	68,102,942	64,819,755	45,859,364
14	Spoolwood	M ft.	17,640	12,017	16,999	8,257
		$	2,132,878	1,604,071	2,748,213	1,233,697
15	Wood pulp	cwt.	36,922,864	44,866,161	38,811,599	39,003,018
		$	208,555,549	365,132,884	291,863,498	248,674,880
16	Pulp board, wall board and paper board	cwt.	1,640,549	2,281,317	1,837,327	1,413,368
		$	7,955,430	14,062,016	11,252,536	7,017,949
17	Book paper	cwt.	345,223	548,769	575,442	568,027
		$	2,755,746	5,283,533	5,343,040	4,872,808
18	Newsprint	cwt.	98,761,380	102,241,224	106,548,605	107,505,019
		$	485,746,314	536,372,498	591,790,209	619,033,394
19	Wrapping paper	cwt.	194,605	333,011	278,707	223,271
		$	1,515,159	3,728,972	3,177,136	1,875,276
20	Newsprint, mutilated, or beater stock, and waste paper	cwt.	1,282,991	1,423,477	972,320	855,795
		$	3,529,075	6,278,987	2,887,880	1,774,980
21	Other wood products and paper	$	36,834,702	53,216,365	67,555,704	51,499,079
	Totals, Wood, Wood Products and Paper	$	**1,112,945,061**	**1,399,076,131**	**1,366,787,043**	**1,295,395,860**
	V. Iron and Its Products					
22	Iron ore	ton	2,227,475	3,225,767	3,846,998	4,819,975
		$	13,309,782	18,596,137	22,333,472	30,842,991
23	Ferro-alloys	ton	122,479	190,454	159,095	90,010
		$	17,075,226	31,347,284	30,379,519	17,206,690
24	Pigs, ingots, blooms and billets	ton	364,988	262,673	432,314	472,427
		$	21,330,625	14,433,432	25,031,837	29,507,976
25	Scrap iron or steel	ton	62,618	39,804	87,788	410,009
		$	2,034,221	1,615,678	4,187,183	15,877,155
26	Castings and forgings	cwt.	310,911	504,868	483,667	429,689
		$	3,413,917	6,291,097	6,173,570	5,899,407
27	Rolling-mill products	ton	59,363	45,739	72,707	115,920
		$	7,120,615	11,805,614	18,844,126	16,863,034
28	Tubes, pipes and fittings	$	2,016,177	1,978,360	2,250,818	1,440,713
29	Wire	$	845,611	764,006	752,936	762,458
30	Chains	$	122,821	298,991	217,017	41,238
31	Engines, boilers and parts	$	14,986,267	9,844,185	10,222,284	13,456,969
32	Farm implements and machinery	$	87,811,385	106,438,161	105,408,256	74,316,318
33	Hardware and cutlery	$	4,500,031	5,160,128	3,600,951	2,349,805
34	Machinery (except agricultural)	$	25,644,253	40,270,782	47,377,520	37,281,996
35	Stamped and coated products	$	128,586	1,007,879	203,040	303,660
36	Tools	$	972,298	1,255,073	1,396,834	1,189,721
	Vehicles and Parts—					
37	Automobiles, freight	No.	10,249	23,308	38,268	17,245
		$	8,827,198	24,872,620	48,831,551	22,257,887
38	Automobiles, passenger	No.	24,085	37,181	41,666	27,977
		$	19,364,912	38,490,266	43,634,467	36,061,152
39	Automobile parts	$	12,036,038	15,763,431	18,548,647	16,999,484
40	Vehicles, *n.o.p.*	$	5,213,115	3,136,382	4,059,250	5,605,633
	Totals, Vehicles and Parts	$	45,441,263	82,262,699	115,073,915	80,924,156
41	Other iron and steel products	$	4,355,460	8,929,197	13,492,761	30,173,765
	Totals, Iron and Its Products	$	**251,108,538**	**342,298,703**	**406,946,039**	**358,438,052**

the United Kingdom and the United States, 1950-53—continued

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
144,257	572,153	223,735	244,215	1,421,958	1,708,304	1,700,383	1,127,603	1
277,763	87,247	387,036	6,820	1,623,122	1,054,114	991,885	555,106	2
—	—	—	—	5,990	138	1,238	1,067	3
794,716	271,621	584,364	1,239,457	2,880,314	2,036,751	2,586,628	2,189,998	4
453,681	267,127	338,736	644,383	1,940,525	1,924,194	1,599,249	1,251,621	
4,315	5,527	1,602	1,411	3,133,140	3,090,668	2,063,130	2,291,605	5
58,676	131,771	16,783	200,077	3,391,448	2,233,100	1,533,563	1,941,122	6
200,034	201,034	45,295	47,508	6,826,803	9,577,955	9,552,083	7,721,494	7
1,138,726	**1,264,859**	**1,013,187**	**1,144,414**	**18,342,986**	**19,588,473**	**17,441,531**	**14,889,618**	
5,245	4,932	12,490	5,586	49,120	35,030	32,380	33,028	8
433,277	585,238	1,541,182	646,983	3,639,353	3,815,306	2,863,469	3,255,453	
27,987	61,345	757,359	1,216,883	38,477	25,415	8,273	123,248	9
59,480	168,520	2,493,517	3,635,195	54,335	35,754	10,519	227,077	
275,425	895,238	850,460	596,173	3,022,169	2,167,358	2,251,166	2,450,493	10
20,353,111	78,964,272	81,958,339	48,735,951	249,599,076	196,780,626	190,983,006	206,676,735	
693	1,001	6,821	4,452	1,747	653	659	1,855	11
78,984	141,464	826,647	405,040	114,172	49,662	49,239	177,632	
28,704	38,050	18,997	22,632	2,842,467	2,477,396	2,056,913	2,006,989	12
235,316	457,582	178,917	263,788	31,619,357	26,231,355	19,518,305	20,246,703	
767,503	3,229,904	5,030,867	4,047,559	33,963,132	59,330,714	55,050,639	40,296,940	13
12,875	7,085	12,596	4,138	4,166	3,875	4,150	3,644	14
1,581,248	931,012	2,168,600	662,919	461,570	464,942	533,216	497,657	
2,358,402	4,345,017	4,213,695	4,299,021	33,888,883	36,628,212	31,779,570	31,989,816	15
13,128,894	37,770,627	35,208,295	28,099,255	191,005,507	276,760,578	225,082,376	202,247,663	
28,689	285,032	289,097	52,261	1,389,975	1,623,995	1,355,094	1,304,754	16
203,849	2,406,975	2,625,884	310,533	6,357,938	8,633,986	6,896,202	6,413,057	
—	154	513	—	298,451	430,739	452,976	470,048	17
—	1,826	2,692	—	2,162,123	3,427,448	3,599,627	3,736,419	
381,903	1,444,094	2,620,101	3,162,152	94,498,732	95,498,938	97,019,236	98,344,316	18
1,861,980	7,488,187	14,575,722	18,237,016	463,155,927	496,852,197	534,372,859	564,464,267	
24,801	76,817	45,366	21,331	43,452	82,528	46,065	94,250	19
195,362	864,501	514,116	179,009	289,450	831,600	381,139	807,776	
—	68,417	56,418	32,354	1,282,959	1,333,531	915,625	821,919	20
..	319,388	179,491	90,270	3,528,977	5,825,120	2,707,834	1,683,037	
1,787,604	7,851,267	17,741,178	5,290,486	30,444,835	35,542,151	38,967,581	40,719,702	21
49,686,608	**141,180,763**	**165,045,447**	**110,604,004**	**1,016,395,752**	**1,114,581,439**	**1,081,016,011**	**1,091,450,118**	
142,589	775,832	705,004	1,205,259	2,031,646	2,184,708	2,010,526	2,064,767	22
707,013	3,796,025	3,680,527	6,541,794	12,329,032	13,121,180	11,395,824	14,126,702	
44,894	52,057	78,093	37,980	72,935	132,569	75,585	50,725	23
5,236,921	8,772,649	16,814,031	7,329,303	11,073,470	21,659,692	12,520,008	9,556,261	
—	52	108,271	41,241	364,476	262,215	323,591	408,749	24
—	134,160	6,470,946	2,883,313	21,303,200	14,267,405	18,490,995	25,475,046	
—	—	48,517	194,812	62,618	39,804	27,308	96,251	25
—	—	2,419,844	7,925,118	2,034,221	1,615,678	1,206,607	3,491,706	
—	—	108	—	309,986	502,644	479,694	422,798	26
—	—	4,700	—	3,393,165	6,223,703	6,117,305	5,753,307	
147	1,158	6,256	374	27,833	16,518	24,955	90,715	27
81,799	2,331,424	3,867,298	299,361	2,836,621	2,582,323	3,845,851	10,902,580	
1,340	27,474	245,680	42,988	89,870	579,210	446,883	253,393	28
32,468	32,658	17,187	8,645	647,208	284,287	391,409	572,211	29
29,465	1,607	—	—	70,312	279,715	185,702	34,828	30
662,995	678,150	301,261	194,899	646,035	3,095,375	1,659,246	3,064,407	31
852,613	571,611	435,477	218,770	70,660,697	83,495,253	83,724,597	58,116,105	32
1,581,564	1,523,514	893,914	569,881	293,164	676,547	723,978	598,766	33
536,751	987,173	1,193,645	1,132,716	7,350,089	12,445,398	16,005,212	16,680,602	34
46	—	30	257	31,994	77,059	52,615	202,352	35
3,306	53,674	162,678	64,039	175,909	263,294	276,965	311,364	36
—	—	—	5	—	4	126	157	37
—	—	—	9,911	—	9,734	234,144	267,918	
124	228	214	37	10	9	41	27	38
180,490	332,603	311,284	63,786	18,368	16,278	84,114	49,542	
34,487	26,791	183,531	130,129	854,276	2,793,824	4,323,215	1,517,347	39
3,789	7,169	15,934	19,068	1,883,383	1,751,478	2,356,126	4,412,504	40
218,766	366,563	510,749	222,894	2,756,027	4,571,314	6,997,599	6,247,311	
154,458	637,213	932,997	47,312	754,436	3,950,345	8,660,622	27,484,933	41
10,099,505	**19,913,895**	**37,950,964**	**27,481,290**	**136,445,450**	**169,187,778**	**172,701,418**	**182,871,874**	

14.—Principal Exports of Canadian Produce from Canada to All Countries,

No.	Item		All Countries			
			1950	1951	1952	1953
	VI. Non-ferrous Metals					
1	Aluminum and manufactures of	$	106,867,384	124,779,435	162,337,931	177,855,833
2	Brass and manufactures of	$	3,361,514	5,660,419	22,872,165	10,859,392
3	Copper and mnaufactures of	$	87,587,076	87,188,071	119,490,527	124,676,914
4	Lead and manufactures of	$	38,198,933	45,392,480	49,742,671	37,889,541
5	Nickel	cwt.	2,433,023	2,623,656	2,840,445	2,902,355
		$	105,299,743	136,689,457	150,981,762	162,542,304
6	Precious metals and manufactures of (except gold)	$	33,567,611	48,523,961	47,377,657	44,351,543
7	Zinc and manufactures of	$	58,893,117	84,450,009	96,703,447	57,698,596
8	Clocks and watches and parts	$	352,877	1,064,249	1,184,108	735,740
9	Electrical apparatus, *n.o.p*	$	11,088,618	17,729,307	33,891,933	37,705,272
10	Printing materials	$	33,975	39,279	67,531	226,915
11	Other non-ferrous metals, including alloys, *n.o.p.*	$	12,011,458	18,353,526	22,082,589	27,641,103
	Totals, Non-ferrous Metals	$	**457,262,306**	**569,870,193**	**706,732,321**	**682,183,153**
	VII. Non-metallic Minerals					
12	Asbestos and manufactures of	$	63,474,897	81,830,822	87,774,683	84,557,404
13	Clay and manufactures of	$	2,201,272	2,537,880	2,482,784	1,946,456
	Coal and Its Products—					
14	Coal	ton	394,961	435,083	388,960	255.274
		$	3,198,040	3,495,664	3,203,522	1,999.908
15	Coke	ton	413,343	219,340	359,456	200.017
		$	6,321,205	3,962.267	5,937.349	3,209,246
16	Creosote and coal-tar oils, *n.o.p.*	gal.	3,145,898	2,369,760	4,605,408	2,672,411
		$	778,182	858,933	1,327,279	933,957
17	Other coal products	$	1,363	71,883	80,412	110,710
	Totals, Coal and Its Products	$	10.298,790	8,388,747	10,548,562	6,253,821
18	Glass and manufactures of	$	932,269	970,031	521,837	1,982,805
19	Graphite, crude or refined	cwt.	60.870	23,032	33,716	65,053
		$	313,457	156.536	191,563	320,688
20	Mica and manufactures of	$	166,641	484,768	156,859	176,128
21	Petroleum and products	$	299,173	2,038,384	8,893,192	6,772,831
22	Stone and its products	$	21,612,350	29,097,164	24,201,111	36,600,068
23	Other non-metallic minerals	$	4,355,911	6,025,114	8,703,176	8,782,921
	Totals, Non-metallic Minerals	$	**103,654,760**	**131,529,446**	**143,473,767**	**147,393,122**
	VIII. Chemicals and Allied Products					
24	Acids	cwt.	1,347,042	1,871,420	1,033,192	1,147,752
		$	3,523,635	5,823,003	2,999,424	1,868,972
25	Alcohols, industrial	$	119,126	31,341	88,433	19,254
26	Cellulose products	$	183,232	1,437,804	513,848	966,258
27	Drugs, medicinal and pharmaceutical preparations	$	4,297,654	6,036,553	5,087,949	5,659,105
28	Explosives	$	769,125	1,249,183	—	—
29	Fertilizers	cwt.	14,831,896	12,452,669	14,914,870	14,235,565
		$	38,873,834	35,733,727	42,292,804	42,632,854
30	Paints, pigments and varnishes		4,025,051	7,998,501	3,773,183	3,574,399
31	Perfumery, cosmetics and toilet preparations.	$	76,499	115,196	123,268	74,727
32	Soap	lb.	168,566	219,421	245,915	236,368
		$	19,558	44,745	39,203	42,644
33	Inorganic chemicals, *n.o.p.*	$	7,726,038	13,862,104	12,394,055	11,307,220
34	Other chemicals and allied products	$	40,911,730	59,357,572	57,253,097	71,739,782
	Totals, Chemicals and Allied Products.	$	**100,525,482**	**131,689,729**	**124,565,264**	**137,885,215**
	IX. Miscellaneous Commodities					
35	Amusement and sporting goods, *n.o.p*	$	469,087	611,361	555,597	1,100,819
36	Brushes	$	219,280	231,870	216,663	265,317
37	Containers, *n.o.p.*	$	1,873,876	3,188,209	4,688,446	2,855,057
38	Household and personal equipment, *n.o.p.*	$	2,717,691	4,531,937	3,016,805	3,318,583
39	Mineral and aerated waters	$	20,745	8,081	300	470
40	Musical instruments	$	373,526	697,672	565,894	582,932
41	Scientific and educational equipment	$	2,645,730	5,520,440	5,569,151	5,787,968
42	Ships and vessels and materials for ships	$	22,847,268	8,773,962	11,629,593	19,992,175
43	Vehicles (except iron)	$	4,846,058	7,928,199	37,783,410	40,388,878
44	Works of art	$	38,963	66,149	54,033	94,081
45	Other miscellaneous commodities	$	24,591,869	29,336,750	39,361,597	49,709,033
	Totals, Miscellaneous Commodities	$	**60,644,093**	**60,894,630**	**103,441,489**	**124,095,313**
	Grand Totals, Exports	$	**3,118,386,551**	**3,914,460,376**	**4,301,080,679**	**4,117,405,882**

the United Kingdom and the United States, 1950-53—concluded

United Kingdom				United States				No.
1950	1951	1952	1953	1950	1951	1952	1953	
39,224,584	57,230,082	90,555,027	65,906,538	49,532,763	40,976,605	44,720,237	90,696,455	1
263,662	945,878	1,018,550	63,462	2,285,647	2,183,592	12,039,921	7,513,446	2
29,275,343	28,588,864	24,793,572	32,273,396	41,940,025	31,116,178	56,468,840	69,702,539	3
2,157,474	12,246,268	8,788,073	10,022,265	30,699,705	24,012,520	35,792,727	22,539,480	4
432,887	626,842	619,034	651,848	1,770,850	1,767,873	1,905,837	1,915,031	5
18,997,379	32,323,665	33,744,999	35,841,974	76,184,024	92,415,560	99,849,500	108,116,943	
11,841,426	15,488,835	17,524,949	14,845,550	20,946,111	31,965,425	29,433,560	28,653,052	6
12,537,326	27,830,564	36,507,644	10,352,594	39,039,988	45,586,330	52,052,257	45,306,831	7
24,515	51,587	36,048	14,574	15,228	125,669	242,733	142,491	8
32,770	195,013	2,563,932	5,994,822	2,683,428	3,497,388	8,633,971	17,012,152	9
8,051	3,368	849	6,854	22,984	34,358	61,063	216,097	10
3,038,148	6,730,651	7,326,611	4,834,535	3,693,283	6,095,036	10,355,551	18,621,652	11
117,400,678	**181,634,775**	**222,860,254**	**180,156,564**	**267,043,186**	**278,008,661**	**349,650,360**	**408,521,138**	
4,761,368	6,371,968	8,009,965	6,088,705	44,571,911	54,800,442	54,182,008	51,451,810	12
—	2,700	1,008	150	526,850	1,003,595	1,120,988	1,122,313	13
—	11,297	—	—	347,849	292,497	276,225	244,321	14
—	108,451	—	—	2,722,308	2,158,906	2,024,528	1,880,351	
8,883	11,315	9,448	12,160	395,665	197,661	339,023	247,409	15
397,550	449,329	382,645	525,999	5,535,752	3,120,931	5,117,173	2,321,852	
—	—	—	—	3,145,493	2,369,760	4,605,408	2,672,411	16
—	—	—	—	777,919	858,933	1,327,279	933,957	
—	—	—	—	1,232	71,638	80,412	101,789	17
397,550	557,780	382,645	525,999	9,037,211	6,210,408	8,549,392	5,237,949	
42	383	1,288	2,917	320,898	270,444	183,833	1,737,206	18
—	—	—	—	60,637	22,966	33,695	65,017	19
—	—	—	—	311,508	155,769	191,344	320,227	
—	—	—	—	165,592	435,041	128,151	120,353	20
193	907,267	176,700	184	73,519	851,357	8,490,970	6,654,829	21
3,504,469	4,428,128	3,730,335	1,606,237	16,714,275	23,263,608	19,384,793	34,384,112	22
863,214	804,332	1,467,745	378,571	2,261,190	2,935,012	4,408,883	5,980,394	23
9,526,836	**13,072,558**	**13,769,686**	**8,602,763**	**73,982,954**	**89,925,676**	**96,640,362**	**107,009,193**	
90,112	106,194	29,032	7,043	1,234,094	1,715,990	988,903	1,131,718	24
890,441	1,182,695	360,790	75,439	2,378,180	4,032,478	2,430,693	1,693,742	
14,263	6,969	8,707	—	70,953	18,016	74,770	17,772	25
7,443	43,951	69,449	3,628	48,896	213,430	60,162	592,580	26
32,554	39,082	65,210	26,994	209,523	220,134	572,375	820,228	27
—	235,295	—	—	354,643	36,856	—	—	28
—	—	20	—	10,943,891	10,724,633	13,041,573	13,239,669	29
—	—	55	—	28,595,218	30,800,905	37,468,621	39,894,244	
329,798	785,791	387,305	502,682	2,813,316	3,737,026	2,003,980	2,100,533	30
942	7,735	71	—	36,912	10,013	32,522	4,825	31
—	—	—	—	10,942	7,350	3,960	974	32
—	—	—	—	1,066	1,318	906	508	
569,075	1,174,420	1,590,044	1,874,852	4,920,977	8,336,226	6,994,331	6,997,796	33
4,148,579	6,894,513	7,230,798	6,067,565	19,069,140	19,846,714	25,468,677	32,476,419	34
5,993,095	**10,370,451**	**9,712,429**	**8,551,160**	**58,498,824**	**67,253,116**	**75,107,037**	**84,598,653**	
67,503	117,146	76,919	64,211	189,322	192,611	284,417	831,375	35
32	46	46	—	14,225	10,701	4,487	74,814	36
85,290	100,101	110,006	21,900	464,008	463,304	466,918	510,507	37
109,894	229,465	135,961	91,096	152,801	250,092	463,684	281,316	38
—	—	—	—	1,544	102	91	470	39
—	—	145	718	283,183	645,095	500,109	523,693	40
306,501	619,982	535,687	549,828	697,464	2,126,443	2,188,777	2,725,248	41
30,986	3,565	7,574	14,549	485,738	656,242	975,273	1,419,845	42
296,041	161,670	828,803	1,608,683	2,527,437	5,943,677	34,071,288	36,617,059	43
110	—	3,645	4,930	38,523	65,422	47,068	69,369	44
2,026,797	1,346,941	1,387,960	2,452,706	15,154,449	19,805,506	26,123,280	35,850,705	45
2,923,154	**2,578,916**	**3,086,746**	**4,808,621**	**20,008,694**	**30,159,195**	**65,125,392**	**78,904,401**	
469,910,011	**631,460,954**	**745,845,393**	**665,232,009**	**2,020,987,630**	**2,297,674,594**	**2,306,954,938**	**2,418,914,783**	

Section 5.—Imports and Exports by Degree of Manufacture, by Origin and by Purpose

Analyses of Canada's trade from the angle of degree of manufacture of imports and exports with leading countries are of value to the student of economic relationships because they present, in summary form, details with significant meaning in the complementary relationship of manufacturing and commerce between geographical areas and countries.

15.—Imports according to Degree of Manufacture, by Leading Countries, 1952 and 1953

Country	1952			1953		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
North America						
United States	483,726	111,705	2,381,531	434,797	91,546	2,694,872
Totals, North America[1]	**483,751**	**111,726**	**2,383,866**	**434,821**	**91,552**	**2,697,874**
Central America and Antilles						
Barbados	—	6,542	2,123	—	206	2,169
Jamaica	394	7,366	1,445	252	10,123	1,387
Trinidad and Tobago	5,434	3,709	517	7,133	105	824
Costa Rica	8,736	—	4	9,460	—	13
Cuba	2,607	11,659	4,349	2,206	5,139	4,309
Dominican Republic	950	4,982	68	391	5,446	17
Honduras	4,638	5	1	4,584	10	—
Mexico	22,040	274	1,623	13,915	333	1,536
Netherlands Antilles	211	—	11,537	337	—	7,818
Panama	4,123	—	2	3,595	17	25
Totals, Central America and Antilles[1]	**54,616**	**35,136**	**22,679**	**48,068**	**22,777**	**19,065**
South America						
British Guiana	9,718	13,035	908	10,794	5,891	1,115
Argentina	991	391	2,992	5,810	133	2,587
Brazil	30,337	479	4,287	29,240	772	5,035
Colombia	17,993	—	11	23,153	8	54
Peru	7,692	3	355	2,548	4	376
Venezuela	127,798	1	7,959	146,275	—	8,872
Totals, South America[1]	**204,924**	**14,125**	**18,021**	**225,874**	**7,472**	**18,985**
Northwestern Europe						
United Kingdom	11,378	33,880	314,499	11,718	44,044	397,629
Belgium and Luxembourg	677	2,431	30,108	1,312	2,561	25,209
France	831	387	17,899	671	1,373	20,224
Western Germany	246	199	22,184	207	1,644	33,656
Netherlands	2,995	1,730	11,770	3,693	2,705	15,900
Norway	23	1,997	1,837	6	252	2,032
Sweden	248	179	8,185	168	531	8,642
Switzerland	30	16	16,350	143	2	20,292
Totals, Northwestern Europe[1]	**17,294**	**40,874**	**427,508**	**18,464**	**53,180**	**528,773**
Southern Europe						
Italy	866	869	10,000	1,287	1,291	11,693
Spain	596	1,269	2,396	739	1,568	2,311
Totals, Southern Europe[1]	**1,579**	**2,490**	**14,258**	**2,205**	**2,945**	**16,171**
Eastern Europe	**2,463**	**11**	**5,079**	**928**	**269**	**4,279**

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[1] Includes other countries not specified.

15.—Imports according to Degree of Manufacture, by Leading Countries, 1952 and 1953—concluded

Country	1952			1953		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
Middle East						
Arabia	7,558	—	1	2,193	—	4
Lebanon and Syria	15,234	—	8	19,630	—	10
Totals, Middle East[1]	**25,584**	**75**	**3,678**	**26,503**	**64**	**4,083**
Other Asia						
Ceylon	2,714	314	9,464	1,047	4,003	9,411
India	4,415	247	22,159	3,885	242	22,500
Malaya and Singapore	19,342	5,878	253	17,294	3,687	916
Japan	2,014	110	11,037	1,794	507	11,329
Philippines	785	4,397	242	737	2,170	79
Totals, Other Asia[1]	**33,409**	**11,124**	**47,486**	**27,547**	**11,064**	**49,124**
Other Africa						
British East Africa	6,672	2,128	793	3,285	5,520	588
Union of South Africa	1,330	1,762	1,074	1,629	1,383	1,604
Gold Coast	5,370	47	106	2,944	113	102
Totals, Other Africa[1]	**18,658**	**4,666**	**2,272**	**13,891**	**11,936**	**2,690**
Oceania						
Australia	6,834	3,547	8,332	6,543	9,211	7,711
Fiji	—	6,467	20	—	5,552	2
New Zealand	7,301	2,724	4,206	7,191	1,296	85
Totals, Oceania[1]	**14,139**	**12,958**	**16,018**	**13,753**	**16,444**	**12,028**
Grand Totals	**856,418**	**233,185**	**2,940,864**	**812,056**	**217,702**	**3,353,073**

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[1] Includes other countries not specified.

16.—Exports of Canadian Produce according to Degree of Manufacture, by Leading Countries, 1952 and 1953

Country	1952			1953		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
North America						
United States	516,344	764,192	1,026,419	518,782	826,965	1,073,168
Totals, North America[1]	**517,420**	**764,336**	**1,028,031**	**519,922**	**827,142**	**1,074,494**
Central America and Antilles						
Jamaica	1,027	222	9,342	841	177	11,472
Trinidad and Tobago	1,654	313	9,068	1,561	417	7,512
Cuba	4,783	2,182	17,217	3,795	1,949	10,380
Mexico	226	5,637	33,778	316	2,748	25,922
Panama	74	41	11,244	48	25	4,307
Puerto Rico	263	1,068	5,997	779	1,492	5,482
Totals, Central America and Antilles[1]	**10,013**	**11,602**	**116,088**	**9,104**	**9,049**	**90,830**

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[1] Includes other countries not specified.

16.—Exports of Canadian Produce according to Degree of Manufacture, by Leading Countries, 1952 and 1953—continued

Country	1952			1953		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
South America						
British Guiana	484	95	5,777	601	65	4,111
Argentina	39	1,097	7,091	1,138	1,325	5,178
Bolivia	5,195	53	1,150	4,616	21	864
Brazil	14,631	8,981	57,755	10,596	4,916	22,048
Chile	3,904	1,877	4,308	34	1,269	2,643
Colombia	1,070	1,788	10,898	2,061	2,211	15,874
Peru	10,359	926	5,120	8,352	953	5,803
Venezuela	2,810	1,488	31,385	3,066	922	32,497
Totals, South America[1]	**40,017**	**16,850**	**130,117**	**33,474**	**12,113**	**93,805**
Northwestern Europe						
United Kingdom	308,994	345,514	91,337	318,220	246,850	100,161
Belgium and Luxembourg	83,517	5,380	15,479	46,593	4,918	17,999
Denmark	7,474	334	2,073	3,578	816	1,909
France	18,060	17,596	12,608	7,322	10,368	14,592
Western Germany	81,636	7,269	5,957	70,190	7,529	6,139
Ireland	14,010	5,873	3,176	10.818	514	2,024
Netherlands	33,617	3,992	3,900	33,993	3,531	4,857
Norway	34,055	262	4,685	33,489	231	3,557
Sweden	3,239	5,577	3,382	480	2,359	1,748
Switzerland	18,214	2,702	6,002	21,945	1,990	5,898
Totals, Northwestern Europe[1]	**606,283**	**395,410**	**150,271**	**551,054**	**279,695**	**161,065**
Southern Europe						
Italy	32,512	5,834	14,298	16,954	3,049	13,167
Totals, Southern Europe[1]	**40,847**	**8,228**	**19,276**	**35,308**	**4,223**	**17,393**
Eastern Europe						
Yugoslavia	21,562	108	944	1,369	33	538
Totals, Eastern Europe[1]	**22,944**	**398**	**2,531**	**1,871**	**496**	**1,412**
Middle East						
Egypt	7,272	231	11,860	7,125	226	4,337
Israel	5,003	830	6,107	6,931	531	1,597
Lebanon and Syria	3,385	231	6,318	1,139	393	4,207
Totals, Middle East[1]	**17,087**	**1,387**	**31,850**	**17,821**	**1,294**	**14,103**
Other Asia						
India	38,582	4,803	12,038	26,855	2,287	8,044
Malaya and Singapore	196	147	6,724	202	68	2,583
Hong Kong	609	842	8,131	281	871	7,848
Pakistan	4,621	1,862	9,533	23,791	35	8,276
Japan	84,062	9,674	8,868	83,935	22,298	12,336
Philippines	51	872	15,121	46	200	13,625
Totals, Other Asia[1]	**128,308**	**18,431**	**77,457**	**143,407**	**27,462**	**67,155**
Other Africa						
Union of South Africa	10,552	5,648	31,652	14,032	9,302	27,429
Totals, Other Africa[1]	**14,224**	**8,360**	**47,293**	**14,439**	**12,056**	**43,501**

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[1] Includes other countries not specified.

16.—Exports of Canadian Produce according to Degree of Manufacture, by Leading Countries, 1952 and 1953—concluded

Country	1952			1953		
	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured	Raw Materials	Partly Manufactured	Fully or Chiefly Manufactured
	$'000	$'000	$'000	$'000	$'000	$'000
Oceania						
Australia	1,828	12,089	35,779	1,042	12,431	26,156
New Zealand	35	2,581	16,228	12	1,786	5,676
Hawaii	367	893	5,020	326	905	4,155
Totals, Oceania[1]	**2,232**	**16,198**	**57,601**	**1,391**	**15,691**	**36,634**
Grand Totals	**1,399,361**	**1,241,201**	**1,660,519**	**1,327,791**	**1,189,222**	**1,600,392**

[1] Includes other countries not specified.

17.—Imports of Certain Raw Materials Used in Canadian Manufactures, 1944-53

NOTE.—Figures for the years ended Mar. 31, 1902-10, are given in the 1926 Year Book, p. 463; those for the years ended Mar. 31, 1911-39, are given in the 1940 edition, p. 533. Calendar-year figures are available for 1926 and subsequent years; those for 1926-43 are given in the 1948-49 edition, pp. 927-928.

Year	Sugar for Refining	Vegetable Oil for Soap	Cotton-seed Oil, Crude	Rubber, Raw (including Balata) and Latex	Tobacco, Raw	Hides and Skins	Cotton, Raw (including Linters)	Hemp, Dressed or Undressed	Silk, etc., Raw
	tons	gal.	cwt.	cwt.	lb.	cwt.	cwt.	cwt.	lb.
1944	445,829	1,902,400	306,224	164,536	1,380,157	230,597	1,816,530	—	—
1945	418,838	3,293,622	244,814	186,609	1,581,290	121,689	2,023,135	—	—
1946	430,849	2,661,722	82,555	300,523	1,745,604	95,687	1,916,390	448	22,893
1947	498,118	1,862,044	49,321	774,559	1,589,359	350,083	2,039,139	—	342,850
1948	613,879	562,644	120,758	957,147	1,617,341	325,669	1,824,746	—	124,504
1949	622,278	516,730	593,353	897,114	1,577,395	3,691,232[1]	2,206,595	1,661	128,501
1950	639,095	2,106,880	842,854	1,036,433	1,321,546	3,334,534[1]	2,455,101	2,154	137,664
1951	546,276	1,410,260	290,157	1,075,486	1,151,574	2,715,160[1]	2,140,281	2,501	70,187
1952	593,215	1,339,850	642,421	789,594	1,677,403	2,138,115[1]	1,799,866	4,838	40,053
1953	549,425	3,360,540	465,196	934,146	1,497,356	2,122,075[1]	1,738,161	860	60,966

	Wool, Raw[2]	Noils, Waste and Tops, Wool	Artificial Silk Rovings, Yarns, etc.	Manila, Sisal, Istle, Tampico	Rags, Waste Paper, and Other Waste	Iron Ore	Alumina, Bauxite, Cryolite	Tin in Blocks, Ingots, etc.	Petroleum Crude for Refining
	cwt.	cwt.	lb.	cwt.	cwt.	tons	cwt.	cwt.	'000 gal.
1944	281,475	62,492	10,161,758	810,906	1,098,846	3,126,649	26,613,324	26,823	1,996,445
1945	304,923	72,849	13,954,822	730,086	1,125,341	3,739,867	18,880,295	71,950	1,987,943
1946	532,407	118,787	7,874,871	967,970	1,767,857	2,281,677	25,723,852	84,020	2,218,963
1947	395,439	121,067	21,975,689	937,017	2,042,162	3,944,550	28,002,714	88,723	2,395,283
1948	425,248	181,038	21,107,587	792,391	2,294,396	4,300,163	40,306,649	80,588	2,643,758
1949	321,443	127,971	22,646,972	440,487	1,583,833	2,517,235	35,887,446	82,332	2,587,709
1950	344,383	168,647	17,424,956	628,945	2,020,442	3,070,557	37,312,022	107,909	2,752,700
1951	301,300	144,560	27,819,536	923,737	2,610,367	3,831,418	48,170,988	137,430	2,914,911
1952	245,422	79,071	19,677,988	905,353	1,716,001	4,267,658	49,148,729	88,466	2,841,968
1953	271,000	133,379	19,913,723	515,635	1,723,226	4,167,571	53,777,021	82,928	2,781,707

[1] Quantity given in number instead of by hundred-weight. [2] Includes hair of the camel, alpaca, goat, etc.

18.—Imports according to Origin, by Group and Degree of Manufacture, 1952 and 1953

Origin	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin						
CANADIAN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	848	84,118	94,242	459	72,967	81,997
Partly manufactured	4	2,299	2,918	18	2,922	4,128
Fully or chiefly manufactured	19,095	31,748	57,900	21,051	32,621	60,870
Totals, Field Crops	19,947	118,165	155,060	21,528	108,510	146,995
Animal Husbandry—						
Raw materials	2,694	13,950	34,179	2,372	19,591	43,453
Partly manufactured	13,552	7,330	25,142	23,159	7,226	34,558
Fully or chiefly manufactured	47,851	13,041	80,802	65,109	16,605	100,460
Totals, Animal Husbandry	64,097	34,321	140,123	90,640	43,422	178,471
All Canadian Farm Products—						
Raw materials	3,542	98,068	128,422	2,831	92,558	125,450
Partly manufactured	13,556	9,629	28,060	23,177	10,148	38,685
Fully or chiefly manufactured	66,946	44,790	138,701	86,161	49,226	161,331
TOTALS, CANADIAN FARM PRODUCTS	84,044	152,486	295,183	112,169	151,932	325,466
FOREIGN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	870	106,937	241,824	1,353	93,068	225,895
Partly manufactured	96	14,827	81,512	504	13,551	72,194
Fully or chiefly manufactured	26,874	121,830	220,644	30,584	130,858	238,547
Totals, Field Crops	27,841	243,594	543,980	32,441	237,477	536,636
Animal Husbandry—						
Raw materials	1,271	7,123	10,193	1,269	4,853	6,703
Partly manufactured	3	25	34	1	2	4
Fully or chiefly manufactured	490	6,357	8,859	424	6,024	8,870
Totals, Animal Husbandry	1,764	13,505	19,085	1,694	10,879	15,577
All Foreign Farm Products—						
Raw materials	2,142	114,060	252,017	2,622	97,921	232,598
Partly manufactured	99	14,852	81,546	505	13,553	72,198
Fully or chiefly manufactured	27,365	128,187	229,503	31,008	136,882	247,418
TOTALS, FOREIGN FARM PRODUCTS	29,606	257,099	563,065	34,135	248,356	552,214
ALL FARM PRODUCTS—						
All Field Crops—						
Raw materials	1,719	191,055	336,066	1,812	166,035	307,892
Partly manufactured	100	17,126	84,430	522	16,472	76,322
Fully or chiefly manufactured	45,970	153,578	278,544	51,636	163,479	299,418
Totals, All Field Crops	47,788	361,759	699,040	53,970	345,986	683,632
All Animal Husbandry—						
Raw materials	3,965	21,073	44,372	3,641	24,444	50,155
Partly manufactured	13,555	7,355	25,176	23,160	7,228	34,562
Fully or chiefly manufactured	48,341	19,398	89,660	65,533	22,629	109,331
Totals, All Animal Husbandry	65,861	47,826	159,208	92,334	54,301	194,048

For footnote, *see* end of table.

18.—Imports according to Origin, by Group and Degree of Manufacture, 1952 and 1953—concluded

Origin	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin—concl.						
All Farm Products—						
Raw materials	**5,684**	**212,127**	**380,438**	**5,453**	**190,479**	**358,048**
Partly manufactured	**13,655**	**24,481**	**109,606**	**23,682**	**23,701**	**110,883**
Fully or chiefly manufactured	**94,311**	**172,977**	**368,204**	**117,168**	**186,107**	**408,749**
Totals, Farm Origin	**113,650**	**409,585**	**858,248**	**146,303**	**400,287**	**877,680**
Wildlife Origin						
Raw materials	378	7,328	8,739	475	7,826	9,232
Partly manufactured	52	1,110	1,217	67	1,467	1,699
Fully or chiefly manufactured	328	851	1,205	300	755	1,092
Totals, Wildlife Origin	**758**	**9,289**	**11,161**	**842**	**10,048**	**12,023**
Marine Origin						
Raw materials	7	2,072	2,888	71	2,729	3,339
Partly manufactured	—	—	—	—	—	—
Fully or chiefly manufactured	317	3,771	6,314	325	4,941	8,232
Totals, Marine Origin	**324**	**5,843**	**9,202**	**396**	**7,670**	**11,571**
Forest Origin						
Raw materials	2	5,256	5,339	1	6,462	6,595
Partly manufactured	42	27,384	29,322	55	28,377	31,086
Fully or chiefly manufactured	4,305	93,765	103,794	4,944	114,566	127,271
Totals, Forest Origin	**4,349**	**126,405**	**138,455**	**5,000**	**149,405**	**164,952**
Mineral Origin						
Raw materials	5,307	256,857	458,929	5,717	227,221	434,764
Partly manufactured	19,558	49,753	82,666	19,521	29,493	64,274
Fully or chiefly manufactured	173,756	1,606,973	1,880,115	228,010	1,814,141	2,140,922
Totals, Mineral Origin	**198,622**	**1,913,583**	**2,421,710**	**253,248**	**2,070,855**	**2,639,960**
Mixed Origin						
Raw materials	—	85	85	—	79	79
Partly manufactured	572	8,977	10,374	719	8,507	9,759
Fully or chiefly manufactured	41,482	503,195	581,231	46,882	574,363	666,807
Totals, Mixed Origin	**42,054**	**512,257**	**591,690**	**47,601**	**582,949**	**676,645**
Recapitulation						
Raw materials	**11,378**	**483,726**	**856,418**	**11,718**	**434,797**	**812,056**
Partly manufactured	**33,880**	**111,705**	**233,185**	**44,044**	**91,546**	**217,702**
Fully or chiefly manufactured	**314,499**	**2,381,531**	**2,940,864**	**397,629**	**2,694,872**	**3,353,072**
Grand Totals	**359,757**	**2,976,962**	**4,030,468**	**453,391**	**3,221,215**	**4,382,830**

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[1] In this classification the expression "Canadian Farm Products" refers to all commodities of which the basic raw materials are such as Canadian farms produce. "Foreign Farm Products" covers materials or commodities such as Canada does not produce in their original forms, e.g., cane sugar, tea, rubber, cotton, silk, etc.

19.—Exports according to Origin, by Group and Degree of Manufacture, 1952 and 1953

Origin	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin						
CANADIAN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	214,750	218,130	947,226	260,640	186,457	875,281
Partly manufactured	387	3,168	8,225	7	2,963	7,473
Fully or chiefly manufactured	41,207	72,852	207,938	44,397	74,837	202,779
Totals, Field Crops	256,343	294,150	1,163,388	305,044	264,257	1,085,533
Animal Husbandry—						
Raw materials	29,838	21,066	57,152	4,695	47,472	61,072
Partly manufactured	1,191	4,212	6,683	1,774	4,822	9,865
Fully or chiefly manufactured	197	19,486	38,166	4,016	27,543	47,556
Totals, Animal Husbandry	31,226	44,763	102,002	10,485	79,837	118,493
All Canadian Farm Products—						
Raw materials	244,588	239,196	1,004,377	265,335	233,929	936,353
Partly manufactured	1,578	7,379	14,908	1,781	7,785	17,338
Fully or chiefly manufactured	41,404	92,338	246,104	48,413	102,379	250,335
TOTALS, CANADIAN FARM PRODUCTS	287,569	338,913	1,265,390	315,529	344,093	1,204,026
FOREIGN FARM PRODUCTS—[1]						
Field Crops—						
Raw materials	—	448	646	—	6	6
Partly manufactured	—	1,779	1,869	—	1,222	1,382
Fully or chiefly manufactured	639	15,535	34,409	452	13,700	20,188
Totals, Field Crops	639	17,762	36,924	452	14,928	21,576
Animal Husbandry—						
Raw materials	—	—	—	—	—	—
Partly manufactured	—	—	—	—	—	—
Fully or chiefly manufactured	—	1	1	—	1	6
Totals, Animal Husbandry	—	1	1	—	1	6
All Foreign Farm Products—						
Raw materials	—	448	646	—	6	6
Partly manufactured	—	1,779	1,869	—	1,222	1,382
Fully or chiefly manufactured	639	15,537	34,410	452	13,702	20,194
TOTALS, FOREIGN FARM PRODUCTS	639	17,764	36,925	452	14,930	21,582
ALL FARM PRODUCTS—						
All Field Crops—						
Raw materials	214,750	218,578	947,872	260,640	186,463	875,287
Partly manufactured	387	4,947	10,094	7	4,185	8,855
Fully or chiefly manufactured	41,845	88,388	242,346	44,849	88,537	222,967
Totals, All Field Crops	256,982	311,913	1,200,312	305,496	279,185	1,107,109
All Animal Husbandry—						
Raw materials	29,838	21,066	57,152	4,695	47,472	61,072
Partly manufactured	1,191	4,211	6,683	1,774	4,822	9,865
Fully or chiefly manufactured	197	19,487	38,168	4,016	27,544	47,562
Totals, All Animal Husbandry	31,226	44,764	102,003	10,485	79,838	118,499

For footnote, *see* end of table.

19.—Exports according to Origin, by Group and Degree of Manufacture, 1952 and 1953—concluded

Origin	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Farm Origin—concluded						
All Farm Products—						
Raw materials	**244,588**	**239,644**	**1,005,023**	**265,335**	**233,936**	**936,359**
Partly manufactured	**1,578**	**9,158**	**16,778**	**1,781**	**9,007**	**18,721**
Fully or chiefly manufactured	**42,043**	**107,875**	**280,514**	**48,865**	**116,080**	**270,528**
Totals, Farm Origin	**288,208**	**356,677**	**1,302,315**	**315,981**	**359,023**	**1,225,608**
Wildlife Origin						
Raw materials	4,057	19,009	23,602	3,900	16,784	21,122
Partly manufactured	—	282	377	1	481	666
Fully or chiefly manufactured	4	483	521	3	567	605
Totals, Wildlife Origin	**4,061**	**19,775**	**24,500**	**3,904**	**17,832**	**22,393**
Marine Origin						
Raw materials	2	69,545	70,102	1	67,967	68,858
Partly manufactured	81	368	449	65	705	770
Fully or chiefly manufactured	989	17,597	46,213	4,783	14,371	44,161
Totals, Marine Origin	**1,072**	**87,510**	**116,765**	**4,849**	**83,043**	**113,789**
Forest Origin						
Raw materials	20,134	68,098	95,280	8,200	53,394	64,142
Partly manufactured	123,843	435,234	614,669	79,315	430,781	556,129
Fully or chiefly manufactured	21,095	577,722	656,928	23,134	607,299	675,214
Totals, Forest Origin	**165,071**	**1,081,054**	**1,366,877**	**110,649**	**1,091,474**	**1,295,485**
Mineral Origin						
Raw materials	40,214	120,048	205,353	40,784	144,814	235,418
Partly manufactured	220,012	318,801	608,537	165,688	385,703	612,571
Fully or chiefly manufactured	16,379	204,838	482,367	12,372	193,793	381,248
Totals, Mineral Origin	**276,604**	**643,687**	**1,296,257**	**218,844**	**724,311**	**1,229,237**
Mixed Origin						
Raw materials	—	—	—	—	1,886	1,891
Partly manufactured	—	349	391	—	288	365
Fully or chiefly manufactured	10,829	117,904	193,975	11,003	141,057	228,637
Totals, Mixed Origin	**10,829**	**118,253**	**194,366**	**11,003**	**143,231**	**230,893**
Recapitulation						
Raw materials	**308,994**	**516,344**	**1,399,361**	**318,220**	**518,782**	**1,327,791**
Partly manufactured	**345,514**	**764,192**	**1,241,201**	**246,850**	**826,965**	**1,189,222**
Fully or chiefly manufactured	**91,337**	**1,026,419**	**1,660,519**	**100,161**	**1,073,168**	**1,600,392**
Grand Totals	**745,845**	**2,306,955**	**4,301,081**	**665,232**	**2,418,915**	**4,117,406**

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[1] In this classification the expression "Canadian Farm Products" refers to commodities actually produced, in their original state, on Canadian farms. "Foreign Farm Products" covers materials or commodities such as Canada does not produce in their original forms, e.g., cane sugar, tea, rubber, cotton, silk, etc.

20.—Imports according to Purpose, by Group, 1952 and 1953

Group and Purpose	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Producers' Materials						
FARM MATERIALS						
Fodders	5	14,610	14,638	1	10,896	10,979
Fertilizers	136	8,865	10,778	145	9,723	12,327
Seeds	461	3,057	4,579	122	1,603	2,410
Other	1,011	8,207	9,779	782	8,827	10,261
TOTALS, FARM MATERIALS	1,612	34,739	39,775	1,049	31,050	35,977
MANUFACTURERS' MATERIALS						
Foodstuffs and beverages	447	5,781	10,397	359	6,183	9,531
Tobacco, smokers' supplies	—	1,555	2,798	—	1,514	2,769
Textiles, clothing, cordage	61,670	157,130	283,241	81,908	143,593	289,897
Fur and leather goods	5,441	26,579	37,706	6,711	26,488	38,031
Sawmills	—	—	—	—	—	—
Rubber industries	798	9,122	32,235	880	11,413	30,197
Other manufactures	52,705	494,608	785,306	66,841	483,660	796,265
TOTALS, MANUFACTURERS' MATERIALS	121,061	694,775	1,151,683	156,698	672,850	1,166,689
BUILDING AND CONSTRUCTION MATERIALS	16,486	112,719	148,383	17,359	123,269	155,340
OTHER PRODUCERS' MATERIALS	51	1,823	1,887	60	2,202	2,276
Totals, Producers' Materials	**139,211**	**844,056**	**1,341,728**	**175,166**	**829,371**	**1,360,283**
Producers' Equipment						
Farm	6,756	193,250	202,673	6,260	206,461	215,850
Commerce and industry	64,527	525,472	612,388	79,156	585,418	690,109
Totals, Producers' Equipment	**71,283**	**718,723**	**815,061**	**85,416**	**791,880**	**905,959**
Fuel, Electricity and Lubricants						
Fuel	4,493	241,069	267,102	4,794	238,745	262,316
Electricity	—	102	102	—	315	315
Lubricants	53	10,443	10,570	78	10,762	10,897
Totals, Fuel, etc.	**4,546**	**251,614**	**277,773**	**4,872**	**249,822**	**273,528**
Transport						
Road	26,719	267,066	294,795	37,802	322,312	363,170
Rail	3	8,141	8,149	3,641	20,185	23,834
Water	655	7,119	7,851	1,116	6,167	7,651
Aircraft	11,653	150,723	162,607	23,699	134,199	158,204
Totals, Transport	**39,030**	**433,048**	**473,402**	**66,258**	**482,863**	**552,859**
Auxiliary Materials for Commerce and Industry						
Advertising material	355	4,722	5,143	391	6,008	6,507
Containers	3,337	19,401	25,384	4,114	22,234	29,428
Other	122	7,077	7,236	165	9,466	9,674
Totals, Auxiliary Materials	**3,813**	**31,200**	**37,763**	**4,670**	**37,708**	**45,608**

20.—Imports according to Purpose, by Group, 1952 and 1953—concluded

Group and Purpose	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Consumer Goods						
Foods	10,262	121,926	282,676	10,551	125,724	273,620
Beverages	10,786	14,889	102,460	13,287	19,061	114,970
Smokers' supplies	326	2,661	3,331	361	3,430	4,152
Clothing	14,684	54,863	73,597	19,185	25,477	50,896
Household goods	25,303	122,464	159,188	30,702	147,375	194,412
Jewellery, time pieces, etc	1,820	8,715	22,931	2,058	10,955	30,683
Books, educational supplies, etc	3,345	44,020	50,083	3,569	51,095	58,052
Recreational equipment, etc	4,227	23,691	31,546	5,607	41,041	51,801
Medical supplies, etc	2,719	31,004	36,617	2,442	32,246	37,990
Other	1,300	5,028	7,405	1,591	7,649	10,975
Totals, Consumer Goods	**74,774**	**429,261**	**769,835**	**89,353**	**464,052**	**827,552**
Totals, Munitions and War Stores	**4,806**	**26,721**	**31,949**	**3,090**	**40,419**	**44,713**
Totals, Live Animals for Food	—	**890**	**891**	—	**486**	**486**
Totals, Unclassified	**22,293**	**241,449**	**282,065**	**24,566**	**324,613**	**371,842**
Grand Totals	**359,757**	**2,976,962**	**4,030,468**	**453,391**	**3,221,214**	**4,382,830**

21.—Exports according to Purpose, by Group, 1952 and 1953

Group and Purpose	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Producers' Materials						
FARM MATERIALS						
Fodders	2,688	136,672	271,729	42,882	143,601	257,388
Fertilizers	—	38,406	43,231	40	40,510	43,290
Seeds	15	13,720	17,107	736	14,430	19,246
Other	—	3,921	4,139	—	4,201	4,256
TOTALS, FARM MATERIALS	2,704	192,720	336,205	43,657	202,741	324,181
MANUFACTURERS' MATERIALS						
Foodstuffs and beverages	189,575	72,570	621,337	206,391	23,720	567,939
Tobacco, smokers' supplies	18,601	10	22,238	12,905	6	15,690
Textiles, clothing, cordage	883	4,383	11,038	868	4,696	10,988
Fur and leather goods	5,474	26,206	33,936	6,095	25,082	36,154
Sawmills	2,368	2,913	6,052	1,052	3,433	5,408
Rubber industries	—	278	281	—	349	352
Other manufactures	330,955	1,313,248	1,898,416	264,890	1,376,507	1,846,181
TOTALS, MANUFACTURERS' MATERIALS	547,856	1,419,609	2,593,299	492,201	1,433,793	2,482,712
BUILDING AND CONSTRUCTION MATERIALS	99,122	219,107	350,764	56,724	237,390	327,580
OTHER PRODUCERS' MATERIALS	—	1,737	2,030	—	384	566
Totals, Producers' Materials	**649,683**	**1,833,173**	**3,282,298**	**592,583**	**1,874,308**	**3,135,039**
Producers' Equipment						
Farm	473	91,621	114,842	266	73,719	91,326
Commerce and industry	9,366	49,141	128,261	9,256	70,010	124,608
Totals, Producers' Equipment	**9,839**	**140,761**	**243,103**	**9,521**	**143,730**	**215,934**

21.—Exports according to Purpose, by Group, 1952 and 1953—concluded

Group and Purpose	1952			1953		
	United Kingdom	United States	All Countries	United Kingdom	United States	All Countries
	$'000	$'000	$'000	$'000	$'000	$'000
Fuel, Electricity and Lubricants						
Fuel	1,023	14,388	18,842	1,055	6,984	9,796
Electricity	—	9,174	9,176	—	8,343	8,345
Lubricants	—	8	203	—	12	42
Totals, Fuel, etc	**1,023**	**23,571**	**28,221**	**1,055**	**15,338**	**18,184**
Transport						
Road	501	8,009	124,969	214	4,096	80,707
Rail	1	706	6,199	—	2,132	9,041
Water	—	905	11,506	—	1,304	19,778
Aircraft	829	33,943	37,503	1,609	36,515	40,247
Totals, Transport	**1,330**	**43,564**	**180,178**	**1,822**	**44,047**	**149,772**
Auxiliary Materials for Commerce and Industry						
Containers	762	5,944	14,689	238	4,562	8,801
Other	—	7	196	—	—	121
Totals, Auxiliary Materials	**762**	**5,951**	**14,885**	**238**	**4,562**	**8,922**
Consumer Goods						
Foods	71,220	126,009	329,404	48,633	149,493	317,670
Beverages	782	46,484	57,079	919	57,706	68,094
Smokers' supplies	56	24	373	103	28	437
Clothing	526	4,207	6,496	411	4,589	6,800
Household goods	128	3,286	9,424	56	2,560	7,139
Jewellery, timepieces, etc	56	270	1,318	29	168	842
Books, educational supplies, etc	209	4,142	10,505	235	3,352	7,891
Recreational equipment, etc	608	7,217	10,645	539	8,398	11,583
Medical supplies, etc	129	1,873	6,664	189	2,231	7,661
Other	9	365	784	11	352	644
Totals, Consumer Goods	**73,723**	**193,877**	**432,692**	**51,123**	**228,875**	**428,763**
Totals, Munitions and War Stores	**1**	**8,434**	**15,765**	—	**38,391**	**43,983**
Totals, Live Animals for Food	—	**2,709**	**2,814**	—	**6,562**	**6,706**
Totals, Unclassified	**9,485**	**54,915**	**101,125**	**8,890**	**63,101**	**110,104**
Grand Totals	**745,845**	**2,306,955**	**4,301,081**	**665,232**	**2,418,915**	**4,117,406**

Section 6.—Comparison of Value, Price and Volume of Foreign Trade

Since the end of World War II there has been a substantial increase in the value of Canada's exports and imports. Changes in the value of trade, however, are the joint product of changes in the volume of goods traded and of the prices at which transactions are conducted. To assess the significance of value changes it is desirable to eliminate the contributions made to them by the price and volume factors.

Special indexes of export and import prices have been developed to provide this information. These indexes are based chiefly on unit values (average prices) calculated from the trade statistics, supplemented by information on wholesale and retail prices. Price relatives are calculated for a sample of commodities representing the greater part of export and import trade, and these relatives are weighted by the percentage of 1948 trade represented by each commodity in the sample in obtaining group and total indexes. By dividing these price indexes into the trade values the effects of price change are removed from the values, or by dividing the price index into an index of values on the same time-base an index is obtained showing changes in the volume of trade from year to year.

The grouping of commodities used in these calculations differs slightly from that of the regular trade statistics, changes being desirable to simplify the pricing problem. The chief difference is that the first two main groups of the trade statistics have been combined into one group, "agricultural and animal products", and that the sub-group "rubber and its products" has been transferred from this group to the "miscellaneous" group.

The import totals differ from those usually published by the exclusion of certain goods brought into Canada by the governments of the United Kingdom and NATO countries for the use of their defence forces. Table **22** shows the value of trade adjusted for pricing purposes, and the value, price and volume indexes of Canadian trade for 1950-53.

Movements in value, price and volume have not always been the same. The volume of imports increased in each year shown in the table, but a sharp fall in import prices reduced the value of imports in 1952 below their 1951 value. From 1950 to 1951 rising prices accounted for more than half of the increase in import value; from 1952 to 1953 there was little change in import prices, and the whole of the value gain was caused by a further increase in import volume. Export prices, like import prices, reached a peak in 1951 and have declined since that year, but in 1952 there was a sufficient increase in the volume of exports to more than offset the decline in prices, and the value of exports advanced.

22.—Declared Values and Value, Price and Physical Volume Indexes of Foreign Trade, by Commodity Group, 1950-53

Commodity Group[1]	1950	1951	1952	1953
	DECLARED VALUES			
	$'000	$'000	$'000	$'000
Imports—				
Agricultural and animal products	522,763	583,674	522,597	526,025
Fibres and textiles	364,509	483,520	359,440	387,115
Wood products and paper	95,859	132,383	129,411	154,445
Iron and steel and products	977,582	1,328,055	1,402,232	1,521,044
Non-ferrous metals and products	219,730	297,353	304,218	376,170
Non-metallic minerals and products	608,445	681,356	638,754	654,524
Chemicals and fertilizer	161,517	194,992	190,843	225,786
Miscellaneous	222,819	375,749	464,059	507,986
Totals, Adjusted Imports[2]	3,173,224	4,077,083	4,011,555	4,353,094
Imports for use of U.K. and NATO Governments	1,029	7,773	18,913	29,736
Totals, Declared Values of Imports	**3,174,253**	**4,084,856**	**4,030,468**	**4,382,830**
Domestic Exports—				
Agricultural and animal products	990,520	1,213,176	1,403,747	1,339,348
Fibres and textiles	29,573	36,858	27,697	24,333
Wood products and paper	1,112,945	1,399,076	1,366,787	1,295,396
Iron and steel and products	273,242	350,369	417,538	376,891
Non-ferrous metals and products	457,262	569,870	706,732	682,183
Non-metallic minerals and products	103,655	131,529	143,474	147,393
Chemicals and fertilizer	100,525	131,690	124,565	137,885
Miscellaneous	50,665	81,892	110,540	113,977
Totals, Declared Values of Exports[3]	**3,118,387**	**3,914,460**	**4,301,080**	**4,117,406**

For footnotes, *see* end of table, p. 1081.

22.—Declared Values and Value, Price and Physical Volume Indexes of Foreign Trade, by Commodity Group, 1950-53—continued

Commodity Group[1]	1950	1951	1952	1953
	VALUE INDEXES (1948=100)			
Imports—				
Agricultural and animal products	129·7	144·8	129·7	130·5
Fibres and textiles	104·0	137·9	102·5	110·4
Wood products and paper	135·9	187·6	183·4	218·9
Iron and steel and products	124·8	169·5	179·0	194·2
Non-ferrous metals and products	140·5	190·1	194·5	240·5
Non-metallic minerals and products	100·9	112·9	105·9	108·5
Chemicals and fertilizer	133·2	160·8	157·3	186·2
Miscellaneous	152·6	257·4	317·9r	347·9
Totals, Imports[2]	**120·4**	**154·8**	**152·3**	**165·2**
Domestic Exports—				
Agricultural and animal products	94·7	116·0	134·3	128·1
Fibres and textiles	64·9	80·9	60·8	53·4
Wood products and paper	116·7	146·7	143·3	135·8
Iron and steel and products	75·3	96·5	115·1	103·9
Non-ferrous metals and products	115·5	143·9	178·5	172·3
Non-metallic minerals and products	109·2	138·6	151·2	155·3
Chemicals and fertilizer	125·9	164·9	156·0	172·7
Miscellaneous	52·2	84·3	113·8	117·4
Totals, Exports[3]	**101·4**	**127·3**	**139·9**	**133·9**
	PRICE INDEXES (1948=100)			
Imports—				
Agricultural and animal products	108·2	122·4	102·3r	97·4
Fibres and textiles	109·3	158·6	108·5	100·4
Wood products and paper	111·6	118·4	115·3	117·1
Iron and steel and products	116·1	122·5	117·3	120·1
Non-ferrous metals and products	106·9	121·2	120·5	119·7
Non-metallic minerals and products	104·4	108·8	101·7	104·8
Chemicals and fertilizer	102·8	117·2	109·0r	109·4
Miscellaneous	121·5	166·6	123·5	111·0
Totals, Imports[2]	**110·3**	**126·2**	**110·4r**	**109·4**
Domestic Exports—				
Agricultural and animal products	105·6	114·8	107·6	103·5
Fibres and textiles	112·8	139·8	120·0	114·1
Wood products and paper	105·0	122·4	122·4	118·3
Iron and steel and products	113·7	126·2	131·4	134·2
Non-ferrous metals and products	115·1	137·9	142·6r	135·0
Non-metallic minerals and products	120·4	131·7	143·1	149·5
Chemicals and fertilizer	104·2	116·7	119·3	117·1
Miscellaneous	112·0	132·3	129·7	123·7
Totals, Exports[3]	**108·3**	**123·0**	**121·8**	**118·3**
	VOLUME INDEXES (1948=100)			
Imports—				
Agricultural and animal products	119·9	118·3	126·8r	134·0
Fibres and textiles	85·2	86·9	94·5	110·0
Wood products and paper	121·8	158·4	159·1	186·9
Iron and steel and products	107·5	138·4	152·6	161·7
Non-ferrous metals and products	131·4	156·8	161·4	200·9
Non-metallic minerals and products	96·6	103·8	104·1	103·5
Chemicals and fertilizer	129·6	137·2	144·3r	170·2
Miscellaneous	125·6	154·5	257·4	313·4
Totals, Imports[2]	**109·2**	**122·7**	**138·0r**	**151·0**

For footnotes, *see* end of table.

22.—Declared Values and Value, Price and Physical Volume Indexes of Foreign Trade, by Commodity Group, 1950-53—concluded

Commodity Group[1]	1950	1951	1952	1953
	Volume Indexes—concluded (1948=100)			
Domestic Exports—				
Agricultural and animal products	89·7	101·0	124·8	123·8
Fibres and textiles	57·5	57·9	50·7	46·8
Wood products and paper	111·1	119·9	117·1	114·8
Iron and steel and products	66·2	76·5	87·6	77·4
Non-ferrous metals and products	100·3	104·4	125·2[r]	127·6
Non-metallic minerals and products	90·7	105·2	105·7	103·9
Chemicals and fertilizer	120·8	141·3	130·8	147·5
Miscellaneous	46·6	63·7	87·7	94·9
Totals, Exports[3]	**93·6**	**103·5**	**114·9**	**113·2**

[1] Groups, though classified by component material, differ slightly from conventional groups (*see* text, p. 1079). [2] Excludes imports for the use of the United Kingdom and NATO Governments [3] Excludes exports of foreign produce.

PART III.—EXTERNAL TRANSACTIONS*

Section 1.—Canadian Balance of International Payments

Canada experienced a current account deficit of $439,000,000 in 1953; this deficit was in contrast to the surplus of $164,000,000 recorded in 1952, which had in turn followed two years of deficit, the first since 1933. An underlying tendency for Canada to be a net importer of capital during periods of great economic activity thus reasserted itself in 1953 when the volume of goods and services imported in response to demands in the Canadian economy rose sharply.

The sudden change from surplus to deficit in 1953 can best be regarded in the perspective of developments over several years. Superimposed on an economy with strong and growing investment and consumption demands has been the increased tempo of defence activities since 1950. These influences have been basic factors in the deficits of the past few years. In 1952, the period of deficits was temporarily ended because of two major developments, namely, the very marked improvement in the terms of trade and a large increase in the volume of grain exports. Since further improvements along these lines were not forthcoming in 1953, the underlying strong increase in import volume led to the reappearance of a current deficit. While there was a marked deterioration in the surplus with overseas countries and an increase in the deficit with the United States in 1953, these developments had the effect of yielding current balances with the United States and overseas countries generally which were remarkably close to those of 1951.

The reappearance of a current account deficit of $439,000,000 in 1953 was accompanied, of course, by net capital imports of this amount. The deficit was more than balanced by heavy flows of long-term capital into Canada for direct and portfolio investment, which have been a feature of Canada's balance of payments in recent years. In 1952, the current account surplus and long-term inflows were balanced by very large outward movements of short-term capital. Short-term movements in 1953, while still outwards, were sharply lower than in 1952. These changes took place without any great change in the external value of the Canadian dollar.

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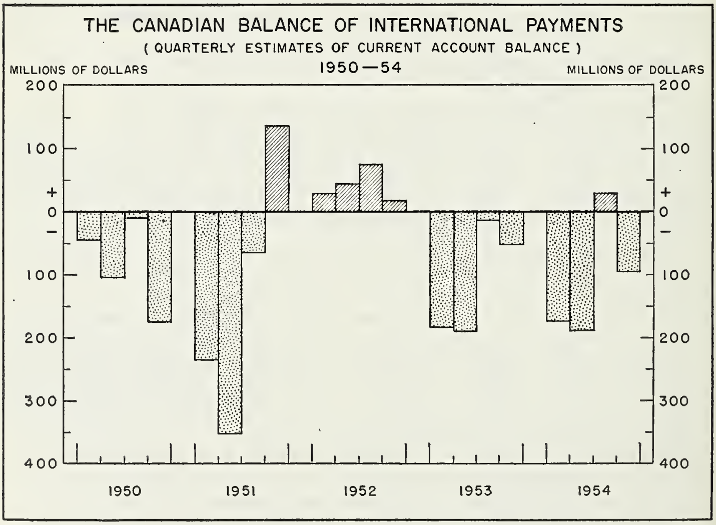
* Prepared in the Balance of Payments Section, International Trade Division, Dominion Bureau of Statistics. More detailed information is given in the publications, *The Canadian Balance of International Payments, 1953*, *International Investment Position*, and *The Canadian Balance of International Payments in the Post-War Years, 1946-52.*

Exchange transfers in settlement of overseas balances were much lower in 1953 than in 1952. In the earlier year, Canada's current account surplus with overseas countries, offset by a small net capital export from Canada, gave rise to record net multilateral receipts of more than $1,000,000,000 available in the United States account. In 1953, the overseas surpluses fell to $485,000,000 but there was a significant net import of capital from overseas of $139,000,000, giving rise to net multilateral settlements of $624,000,000. The receipt by Canada in 1953 of exchange transfers in excess of the net balance of goods and services provided to overseas countries represented, in part, a settlement of the earlier current account deficits of these countries, which were financed through the extension of the loans now being repaid; it also reflected the use by overseas countries of their available resources for investment in the Canadian economy rather than for imports on the scale of the previous year.



Current Account Transactions.—The abrupt swing in Canada's current account from surplus to deficit in 1953 was mainly the result of a deterioration of $546,000,000 in the commodity trade balance. The most important factor was a continued rise in import volume, although a slight decrease in export volume and some shift in terms of trade were contributory. Unadjusted trade returns indicate a rise of 9 p.c. in the value of imports, attributable to larger volume. The value of domestic exports declined by about 4 p.c., reflecting mainly the fall of 3 p.c. in export prices. On an annual basis, the effect of price changes was to lead to some worsening of the terms of trade in 1953, compared with 1952; the terms of trade in 1953, however, were still substantially more favourable than those of any year from 1948 to 1951. This was a reflection of the fact that the rapid rise in export and import prices in 1951 had since been largely reversed for imports but not for exports; import prices in 1952 and 1953 were at about the 1950 average, while export prices were well above that average.

The decrease in export values in 1953 was spread over a number of leading commodities. The improved supply situation abroad was an important factor in the 8·5 p.c. decline of wheat exports, but the 1953 total of $568,000,000 was above that of any post-war year except 1952. Sales of newsprint rose to an all-time peak of $619,000,000, but sales of wood and other wood products fell, owing partly to lower prices. Exports of aluminum, copper and nickel were higher, but these gains were more than offset by the lower values of zinc and lead exports which were particularly affected by low prices. There were some substantial decreases in the value of exports of manufactured goods. Exports of automobiles were well below the exceptional levels of 1952. Unusually high sales in earlier years, combined with declining farm income in the United States and exchange difficulties overseas, contributed to the decline in exports of farm implements.

The decrease in exports was concentrated in overseas markets. Exports of grains to the United Kingdom rose in 1953, particularly exports of barley, and increases occurred in some other products; sharp decreases in exports of beef, lumber, zinc and aluminum more than offset these increases. Most other sterling-area countries also reduced their imports from Canada; the major exceptions were the Union of South Africa and Pakistan. Large exports of wheat, some of which were financed under the Colombo Plan, raised exports to the latter country. Exports to OEEC countries in Europe and their dependencies fell sharply. The drop in exports of grains to this group of countries (which included Belgium, Canada's third largest market in 1952) was the major factor in the over-all decline. Exports to other foreign countries were generally lower. The major exceptions were Japan and Korea; the former was Canada's third largest export market in 1953. In contrast to overseas markets, purchases by the United States increased. With prices somewhat lower, the increase in value reflected an appreciable increase in volume. Seven of the nine groups of exports to the United States were higher in value in 1953.

For most groups of imports, prices were only slightly different from the 1952 levels. Group price indexes were substantially lower for fibres and textiles and the miscellaneous products groups. Volume indexes were significantly higher in all import groups except non-metallic minerals. The increases are, of course, closely related to the heavy spending on consumption and investment which characterized the Canadian economy in 1953. Import volume from the United States rose by almost 8 p.c. as major increases occurred in the value of imports of electrical apparatus and automobiles and parts. Imports from overseas countries generally rose, the United Kingdom accounting for most of the increase.

The deficit on non-merchandise items in 1953 was $382,000,000, an increase of $57,000,000 over 1952. Large payments on income account and for business services lead each year to substantial net payments on account of this group of transactions. The largest contributor to the change from 1952 was the freight and shipping account where the effects of a much larger volume of imports and a small reduction in the volume of exports led to a significant deficit. Miscellaneous current transactions also led to an increased deficit. Higher defence expenditure in Canada by the United States Government was more than offset by Canadian Government spending abroad, including some special settlements of costs in Korea. On the other hand, there were larger net receipts by Canada on income account and on migrants' account and inheritances.

Capital Movements.—Persistent inflows of long-term capital to finance Canadian development continued, through 1953, to be the outstanding feature of the capital account in Canada's balance of payments. Of particular significance in 1953 was the net import of capital from overseas countries amounting to $139,000,000. In only two other years since the War have net inflows occurred, and the amount in each case was less than half the figure for 1953. While repayments on official loans accounted for a substantial part of the inflow, there were also important transfers of private capital for direct and other long-term investment.

Inflows for direct investment in foreign-controlled companies and branches have risen year by year since the War and reached $398,000,000 in 1953, a rise of 15 p.c. over 1952. Movements from the United Kingdom and other overseas countries rose significantly and were greater than in any two previous post-war years, but well over 80 p.c. of the net inflows continued to be from the United States. Slightly more than three-quarters of the gross inflows from that country were for mining, petroleum and related utilities. Movements of capital from Canada for direct investment abroad continued at a high level in 1953, totalling $56,000,000, but failed to equal the record of the previous year.

A substantial volume of sales of new Canadian security issues abroad, mainly in the United States, contributed to a net capital inflow from transactions in Canadian securities. Trading in outstanding issues resulted in repatriation. Net repurchases of bonds and debentures of governments and municipalities totalled $59,000,000, but were offset to the extent of $28,000,000 by sales of corporate securities. While the general pattern of trading over the year as a whole was the same as in 1952, these opposite movements took place on a reduced scale and the net capital export was also smaller in 1953. Transactions with the United Kingdom led to an inflow of $27,000,000, the first annual sales balance since 1937, and net sales of $22,000,000 to other overseas countries were also higher than in 1952. The capital export to the United States fell from $104,000,000 in 1952 to $80,000,000 in 1953. Proceeds of the sales abroad of new issues totalled $342,000,000; about two-thirds of this total represented borrowing by provincial governments and municipalities, while most of the balance covered new issues of corporation bonds and stocks. Retirements aggregating $142,000,000 were dominated by the negotiated repurchase for Government account of $75,000,000 of an external loan. Transactions in foreign securities were practically in balance and the result of all security transactions was a capital import of $168,000,000.

Other capital movements in 1953 included the receipt by Canada of principal repayments of $87,000,000 on loans to other governments, and a reduction of $17,000,000 in Canadian dollar holdings of foreigners. Official holdings of gold and foreign exchange were reduced by $38,000,000, which was less than the amount of the special repatriation transaction mentioned in the preceding paragraph.

The major change from 1952 to 1953 in the capital account was in "other capital movements", which resulted in a net outflow of $179,000,000 in contrast to the spectacular outflow of over $500,000,000 in 1952. These outflows followed a period of substantial inflows in 1950 and the first half of 1951. With the re-emergence of a current account deficit in 1953, a much smaller part of long-term capital inflows was available for other capital movements. This category includes a wide variety of transactions including changes in loans and advances outstanding, in inter-company accounts, and in private, commercial and banking balances and short-term investments abroad.

1.—Current Account between Canada and All Countries, 1930-53

(Net Credits +; Net Debits −)
(Millions of Canadian Dollars)

Year	Current Receipts	Current Expenditure	Net Balance on Current Account	Year	Current Receipts[1]	Current Expenditure[2]	Net Balance	Mutual Aid and Other Official Contributions in Current Account	Net Balance on Current Account
1930....	1,297	1,634	−337	1942.....	3,376	2,275	+1,101	−1,002	+99
1931....	972	1,146	−174	1943.....	4,064	2,858	+1,206	−518	+688
1932....	808	904	−96	1944.....	4,557	3,539	+1,018	−960	+58
1933....	829	831	−2	1945.....	4,456	2,910	+1,546	−858	+688
1934....	1,020	952	+68	1946.....	3,365	2,905	+460	−97	+363
1935....	1,145	1,020	+125	1947.....	3,748	3,661	+87	−38	+49
1936....	1,430	1,186	+244	1948.....	4,147	3,673	+474	−23	+451
1937....	1,593	1,413	+180	1949.....	4,089	3,906	+183	−6	+177
1938....	1,361	1,261	+100	1950.....	4,297	4,569	−272	−62	−334
1939....	1,457	1,331	+126	1951.....	5,311	5,674	−363	−154	−517
1940....	1,776	1,627	+149	1952^{r}....	5,858	5,478	+380	−216	+164
1941....	2,458	1,967	+491	1953^{p}....	5,758	5,927	−169	−270	−439

[1] Includes Mutual Aid exports. [2] Excludes Mutual Aid offsets.

2.—Geographical Distribution of the Balance on Current Account between Canada and Other Countries, 1930-53

NOTE.—In the years 1942-48 balances include exports of currently produced goods provided as Mutual Aid or Official Contributions. (*See* also Table 1.)

(Net Credits +; Net Debits −)
(Millions of Canadian Dollars)

Year	United States[1]	United Kingdom[2]	Other Overseas Countries[3]	All Countries	Year	United States[1]	United Kingdom[2]	Other Overseas Countries[3]	All Countries
1930....	−344	−106	+113	−337	1942.....	−180	+1,223	+58	+1,101
1931....	−205	−54	+85	−174	1943.....	−19	+1,149	+76	+1,206
1932....	−168	−14	+86	−96	1944.....	+31	+746	+241	+1,018
1933....	−113	+26	+85	−2	1945.....	+36	+747	+763	+1,546
1934....	−80	+46	+102	+68	1946.....	−607	+500	+567	+460
1935....	−29	+62	+92	+125	1947.....	−1,134	+633	+588	+87
1936....	−1	+122	+123	+244	1948.....	−393	+486	+381	+474
1937....	−77	+135	+122	+180	1949.....	−601	+446	+332	+177
1938....	−149	+127	+122	+100	1950.....	−400	+24	+42	−334
1939....	−116	+137	+105	+126	1951.....	−951	+223	+211	−517
1940....	−292	+343	+98	+149	1952^{r}....	−849	+388	+625	+164
1941....	−318	+734	+75	+491	1953^{p}....	−924	+142	+343	−439

[1] Includes all net exports of non-monetary gold. [2] Excludes wheat exports diverted to other overseas countries and exports of gold. [3] Includes estimated value of wheat sold in European countries.

3.—Balance of International Payments between Canada and All Countries, 1948-53

(Millions of Canadian Dollars)

Item	1948	1949	1950	1951	1952	1953p
A. CURRENT RECEIPTS—						
Merchandise exports (adjusted)[1]	3,030	2,989	3,139	3,950	4,339	4,152
Mutual Aid to NATO countries	—	—	57	145	200	246
Gold production available for export	119	139	163	150	150	144
Tourist and travel expenditure	279	285	275	274	275	302
Interest and dividends	70	83	91	115	145	164
Freight and shipping	336	303	284	351	383	337
All other current credits	313	290	288	326	366	413
TOTALS, CURRENT RECEIPTS	4,147	4,089	4,297	5,311	5,858	5,758
B. CURRENT PAYMENTS—						
Merchandise imports (adjusted)	2,598	2,696	3,129	4,097	3,850	4,209
Tourist and travel expenditure	134	193	226	280	341	365
Interest and dividends	325	390	475	450	413	410
Freight and shipping	279	253	301	354	375	382
Official contributions	23	6	62	154	216	270
All other current debits	337	374	438	493	499	561
TOTALS, CURRENT PAYMENTS	3,696	3,912	4,631	5,828	5,694	6,197
C. NET BALANCE ON CURRENT ACCOUNT	+451	+177	−334	−517	+164	−439
D. CAPITAL TRANSACTIONS—						
Direct investment in Canada	+71	+94	+222	+309	+346	+398
Net new issues or retirements of Canadian securities held abroad	+36	−42	−74	+227	+227	+200
Net sales or purchases of outstanding securities	−4	+30	+399	+53	−82	−10
Loans and Advances by Government of Canada—						
Loan of 1946 to United Kingdom	−52	−120	−50	+14	+14	+14
Post-war loans to other countries	−74	+13	+23	+20	+19	+23
Repayments on war loans to United Kingdom	+64	+5	+51	+34	+23	+50
Change in Canadian dollar holdings of foreigners	−21	+40	+233	−192	−66	−17
Other capital movements[2]	+25	−63	+224	+91	−565	−261
NET MOVEMENT OF CAPITAL EXCLUSIVE OF CHANGE IN OFFICIAL HOLDINGS OF GOLD AND U.S. DOLLARS	+45	−43	+1,028	+556	−84	+397
E. CHANGE IN OFFICIAL HOLDINGS	+496	+134	+694	+39	+80	−42

[1] Includes official contributions in kind, *n.o.p.*

[2] Includes errors and omissions.

4.—Current Account Transactions between Canada and the United States, 1948-53

(Millions of Canadian Dollars)

Item	1948	1949	1950	1951	1952	1953p
A. CURRENT RECEIPTS—						
Merchandise exports (adjusted)	1,508	1,521	2,046	2,326	2,346	2,458
Net exports of non-monetary gold	119	139	163	150	150	144
Travel expenditure	267	267	260	258	257	282
Interest and dividends	37	40	50	57	85	99
Freight and shipping	131	126	157	164	174	164
All other current receipts	185	176	201	223	262	296
TOTALS, CURRENT RECEIPTS	2,247	2,269	2,877	3,178	3,274	3,443
B. CURRENT PAYMENTS—						
Merchandise imports (adjusted)	1,797	1,899	2,093	2,842	2,817	3,046
Travel expenditure	113	165	193	246	294	307
Interest and dividends	267	325	411	382	344	341
Freight and shipping	213	193	240	276	302	301
All other current payments	250	288	340	383	366	372
TOTALS, CURRENT PAYMENTS	2,640	2,870	3,277	4,129	4,123	4,367
C. CURRENT ACCOUNT BALANCE	−393	−601	−400	−951	−849	−924

5.—Current Account Transactions between Canada and the United Kingdom, 1948-53

(Millions of Canadian Dollars)

Item	1948	1949	1950	1951	1952	1953^{p}
A. Current Receipts—						
Merchandise exports (adjusted)	703	701	469	636	727	656
Travel expenditure	9	11	7	8	10	12
Interest and dividends	9	9	6	30	29	31
Freight and shipping	105	89	61	91	105	87
All other current receipts	96	87	47	56	54	56
Totals, Current Receipts	922	897	590	821	925	842
B. Current Payments—						
Merchandise imports (adjusted)	287	300	399	417	350	462
Travel expenditure	12	17	19	20	27	31
Interest and dividends	50	55	54	57	56	55
Freight and shipping	34	32	36	43	42	45
All other current payments	53	47	58	61	62	107
Totals, Current Payments	436	451	566	598	537	700
C. Current Account Balance	+486	+446	+24	+223	+388	+142

6.—Capital Transactions between Canada and the United States,[1] 1949-53

(Millions of Canadian Dollars)

Item	1949	1950	1951	1952	1953
A. Current Account Balance	−601	−400	−951	−849	−924
B. Capital Account—					
Direct investments in Canada	+84	+200	+270	+319	+330
Canadian direct investments abroad	+16	+41	−4	−42	−26
New issues of Canadian securities	+105	+210	+404	+315	+329
Retirements of Canadian securities	−136	−263	−159	−75	−132
Net trade in outstanding Canadian securities	+25	+362	+20	−104	−80
Transactions in foreign securities	+16	+73	+17	+4	+3
Change in Canadian dollar holdings of foreigners	−8	+89	−53	−37	−1
Other capital movements[2]	−38	+249	+59	−458	−165
Net capital movement	+64	+961	+554	−78	+258
Balance settled by exchange transfers	+671	+133	+436	+1,007	+624
C. Change in Official Holdings of Gold and U.S. Dollars	+134	+694	+39	+80	−42

[1] Includes some capital transactions on account of "other overseas countries".

[2] Includes errors and omissions.

Section 2.—Travel Between Canada and Other Countries

In 1953, more than 51,000,000 persons crossed the International Boundary from the United States to Canada, 3,000,000 more than the previous record established in 1952. United States travellers entering Canada numbered 28,000,000 and residents of Canada returning from visits to the United States numbered 23,000,000. Travellers arriving in Canada from overseas by way of both Canadian and United States ports numbered 38,200 in 1953 as compared with 38,000 in 1952, while residents of Canada returning from overseas countries numbered 80,500 in 1953 and 64,800 in 1952.

Receipts from travel in Canada by non-residents had been fairly constant throughout the period 1948-52, but reached a new record of $302,000,000 in 1953, an increase of $27,000,000 over the previous year. On the other hand, expenditures of Canadian travellers in other countries increased by $24,000,000 to $365,000,000 in the same comparison. The debit balance on travel account with the United States, which had been $37,000,000 in 1952, was reduced to $25,000,000 in 1953, but that with overseas countries increased from $29,000,000 to $38,000,000, resulting in a total debit balance on travel account with all countries of $63,000,000 in 1953 as compared with $66,000,000 in 1952.

United States Travel Expenditures in Canada.—Residents of the United States travelling in Canada in 1953 spent a record amount of $282,000,000, $25,000,000 more than in 1952; automobile traffic accounted for over $14,000,000 of the increase and non-automobile traffic for nearly $11,000,000.

The total number of non-resident automobiles entering Canada in 1953 was 8,200,000, an increase of nearly 9 p.c. over 1952. Non-permit or local traffic increased by 8 p.c. and entries on customs permits by 10 p.c. Expenditures of customs-permit automobile traffic increased at a rate slightly higher than the volume, resulting in average expenditures somewhat above the 1952 figure. All provinces, except Ontario, recorded increases ranging from $1.56 per vehicle in Manitoba to $12.64 in Saskatchewan. Ontario's decline amounted to $2.17 per vehicle. Expenditures of the non-permit class increased by $3,000,000 or 17 p.c. in 1953.

Of the 46,289,129 automobiles registered in the United States in 1953, 2,465,495, or slightly over 5 p.c., entered Canada on customs permits.

Bus traffic accounted for nearly half the $11,000,000 increase in expenditures of non-automobile traffic in 1953, although the volume declined by 5 p.c. The $3,000,000 increase in expenditures of travellers by air in 1953 was accounted for by increased volume, since average expenditure was slightly less than in 1952. Travellers by rail spent about $2,000,000 less in 1953, the result of a decline of over 8 p.c. in volume, although average expenditure was higher. Lower average expenditure for travellers arriving by boat offset an increase in volume, leaving the aggregate unchanged from the previous year. Expenditures of the residuary classification known as "Other travellers" increased by nearly $5,000,000 during 1953 as a result of a greater number of entries. Included in the expenditure of this class are passenger fares earned by Canadian companies carrying residents of the United States overseas.

Although residents of the United States spent more on travel outside their own country in 1953 than in any previous year, for the first time in over twenty years Canada received a smaller portion of that expenditure than Europe and the Mediterranean area. According to the United States Department of Commerce, expenditures on travel outside the United States in 1953 surpassed the previous record established in 1952 by about 10 p.c. In 1953, European and Mediterranean countries received 33 p.c., Canada 32 p.c., Mexico 21 p.c., the West Indies and Central America 9 p.c., and other countries 5 p.c.

Canadian Travel Expenditures in the United States.—Expenditures by residents of Canada in the United States reached a new peak in 1953, but the rate of increase was more moderate than that experienced in 1952 and also more moderate than the rate of increase in volume would indicate. Expenditures by residents of Canada in the United States are estimated at $307,000,000, an increase of more than $13,000,000 over the previous year.

Although the number of visits to Canada by residents of the United States exceeded visits of Canadians to the United States by nearly 5,000,000 or over 20 p.c., expenditures of Canadians in the United States exceeded expenditures of Americans in Canada by $25,000,000 or approximately 9 p.c. It will be noted that in a corresponding comparison in 1952, visits by Americans exceeded return visits of Canadians by 22 p.c. and Canadian expenditures in the United States were 14 p.c. higher than American expenditures in Canada. Thus, it appears that average expenditures by Canadians in foreign countries are higher than non-resident expenditures in Canada. In 1953, the average rate per person for visits lasting longer than 48 hours was $86 for Canadians visiting the United States and $52 for Americans visiting Canada compared with $88 and $51, respectively, in 1952. If the population of the two countries is taken into consideration, residents of Canada spent an average of $20.79 per capita in the United States during 1953, and residents of the United States spent an average of $1.77 per capita in Canada.

Most of the gain in expenditures by Canadians in the United States was in the short-term category which accounted for nearly 73 p.c. or over $10,000,000 of the increase over 1952. Within the short-term group, expenditures of the two-day motorists accounted for 41 p.c. of the increase, followed in order of importance by other travellers making up 34 p.c., and the one-day motorists 25 p.c. Shopping trips close to the 48-hour period in the United States may have been responsible for a considerable portion of the gain in the two-day class. Purchases declared under the $100 customs exemption were $72,000,000 in 1953, an increase of nearly $6,000,000 over the previous year. The advance in value of declared purchases made up 42 p.c. of the total increase of Canadian travel expenditures in the United States in 1953 and 41 p.c. of the increase in 1952 over 1951. The pattern of expenditures for purchases of merchandise did not change materially during the period 1950 to 1953 when purchases of clothing made up nearly 50 p.c. of the expenditures declared under the $100 exemption.

Travel Between Canada and Overseas Countries.—Travel between Canada and overseas countries produced the greatest debit balance in 1953 of any year on record. The adverse balance on overseas travel account during 1953 amounted to $38,000,000, an increase of $9,000,000 over the previous high established in 1952.

Visitors arriving in Canada direct from overseas countries by way of Canadian ports in 1953 numbered 21,600 of whom 11,300 or 52 p.c. travelled by boat and the other 48 p.c., representing 10,300 passengers, travelled by air. The total represents a decline from the 1952 figure of over 2 p.c.; ship traffic declined 7 p.c. and air traffic increased between 3 and 4 p.c. In addition to the direct traffic to Canada, 16,600 overseas visitors arrived via the United States, making a total of 38,200.

Expenditures in Canada by non-immigrant arrivals from overseas countries are estimated at $20,000,000, $2,000,000 higher than the previous record expenditures in 1949 and 1952. Included in these totals are transportation costs paid to Canadian carriers.

Residents of Canada returning from overseas countries via Canadian ports numbered 61,500, an increase of 12 p.c. over the previous record in 1952. Approximately 45 p.c. of the residents returning direct in 1953 re-entered through the airports of Gander, Dorval and Malton compared with 38 p.c. in 1952. Canadian travellers returning by way of the United States are estimated at 19,000 making a total of 80,500 via Canadian and United States ports.

Expenditures of Canadians travelling in overseas countries amounted to $58,000,000 in 1953, the highest ever recorded and an increase of 23 p.c. or $11,000,000 over the previous year. Included in this amount are transportation fares paid to non-Canadian carriers.

7.—Number and Expenditure of Foreign Travellers in Canada and Canadian Travellers Abroad, 1952 and 1953

Year and Class of Traveller	Foreign Travellers in Canada[1]	Foreign Expenditure in Canada	Canadians Travelling Abroad[1]	Canadian Expenditure Abroad	Excess of Foreign Travellers in Canada[1]	Excess of Foreign Expenditure in Canada
	No.	$'000	No.	$'000	No.	$'000
1952						
Travellers from and to overseas countries	22,000	18,000	54,812	47,000	−32,812	−29,000
Travellers from and to the United States—						
Automobile—						
Short-term visit[2]	15,775,123	36,000	11,173,553	41,800	+4,601,570	−5,800
Long-term visit	2,793,123	106,500	1,240,135	76,700	+1,552,988	+29,800
Rail	1,110,471	45,900	554,573	75,200	+555,898	−29,300
Boat	302,834	14,200	95,656	3,800	+207,178	+10,400
Bus (exclusive of local bus)	375,051	18,100	587,998	51,500	−212,947	−33,400
Aircraft	185,129	21,900	165,562	26,100	+19,567	−4,200
Other (pedestrians, local bus, etc.)	5,735,103	14,400	7,694,547	18,400	−1,959,444	−4,000
Totals, United States	26,276,834	257,000	21,512,024	293,500	+4,764,810	−36,500
Totals, All Countries	**26,298,834**	**275,000**	**21,566,836**	**340,500**	**+4,731,998**	**−65,500**
1953						
Travellers from and to overseas countries	21,575	20,000	61,482	58,000	−39,907	−38,000
Travellers from and to the United States—						
Automobile—						
Short-term visit[2]	16,389,423	40,400	12,194,920	48,500	+4,194,503	−8,100
Long-term visit	3,003,821	116,500	1,389,432	84,500	+1,614,389	+32,000
Rail	1,026,109	43,900	512,523	61,600	+513,586	−17,700
Boat	325,404	14,200	127,144	5,100	+198,260	+9,100
Bus (exclusive of local bus)	352,205	23,000	538,222	45,900	−186,017	−22,900
Aircraft	213,415	24,900	200,456	39,900	+12,959	−15,000
Other (pedestrians, local bus, etc.)	6,714,369	19,300	8,349,145	21,800	−1,634,776	−2,500
Totals, United States	28,024,746	282,200	23,311,842	307,300	+4,712,904	−25,100
Totals, All Countries	**28,046,321**	**302,200**	**23,373,324**	**365,300**	**+4,672,997**	**−63,100**

[1] As these figures are the number of entries and re-entries into Canada, they include substantial amounts of in-transit, commuting and local traffic.

[2] Visits of less than 48 hours.

8.—Summary of Highway Traffic at Canadian Border Points, by Province, 1952 and 1953

Province or Territory	Foreign Vehicles Inward					
	Non-Permit Class Local Traffic		Travellers' Vehicle Permits		Commercial Vehicles	
	1952	1953	1952	1953	1952	1953
	No.	No.	No.	No.	No.	No.
Nova Scotia and New Brunswick	967,478	1,009,549	152,421	161,286	89,951	83,707
Quebec	289,369	348,679	393,507	413,016	43,110	59,019
Ontario	3,806,941	4,127,205	1,362,363	1,534,135	138,571	190,197
Manitoba	71,783	71,334	38,040	39,971	6,801	7,218
Saskatchewan	25,655	25,493	19,288	21,155	5,658	7,927
Alberta	19,847	23,254	42,743	44,450	3,988	6,013
British Columbia	109,917	122,165	262,550	283,846	14,606	17,232
Yukon Territory	2,263	1,520	7,253	8,255	1,051	1,176
Totals	**5,293,253**	**5,729,199**	**2,278,165**	**2,506,114**	**303,736**	**372,489**
Percentage increase, 1953 over 1952	+8·2		+10·0		+22·6	
	Canadian Vehicles Returning					
	After Stay of 24 Hours or Less		After Stay of Over 24 Hours		Commercial Vehicles	
	1952	1953	1952	1953	1952	1953
	No.	No.	No.	No.	No.	No.
Nova Scotia and New Brunswick	1,071,888	1,128,197	31,698	44,816	91,690	93,575
Quebec	589,205	704,508	141,396	160,510	68,751	90,117
Ontario	1,368,502	1,488,384	263,158	281,225	136,040	112,547
Manitoba	115,966	125,330	44,498	51,059	16,975	20,222
Saskatchewan	55,101	57,265	31,011	35,461	13,731	14,702
Alberta	28,146	28,036	32,260	34,529	8,418	7,172
British Columbia	465,460	513,797	141,238	153,443	28,471	32,910
Yukon Territory	212	405	167	212	95	121
Totals	**3,694,480**	**4,045,922**	**685,426**	**761,255**	**364,171**	**371,366**
Percentage increase, 1953 over 1952	+9·5		+11·1		+2·0	

Tourist Information.—Tourist information generally is supplied by the Canadian Government Travel Bureau, Ottawa, while detailed information on the National Parks and Historic Sites is available from the Department of Northern Affairs and National Resources, Ottawa. For advice regarding specific provinces or particular cities or resorts, the tourist may apply to the provincial or municipal bureau of information concerned. (*See* Directory of Sources of Official Information in Chapter XXIX under the heading "Tourist Trade".)

PART IV.—THE GOVERNMENT AND FOREIGN TRADE

Section 1.—Foreign Trade Service and Associated Agencies concerned with the Development of Foreign Trade*

Foreign trade contributes substantially to the welfare and prosperity of Canadians, largely because of the fact that the productive capacity of Canada is greater than the ability of its population to consume the output of farms, factories, forests, fisheries and mines. Every effort is made, therefore, to establish and maintain close commercial relations with other countries whose markets are essential to the Canadian economy. It is appreciated, however, that two-way trade should be encouraged in order that goods and services may be accepted in partial payment for the products Canada is in a position to export. Furthermore, many commodities that are not indigenous to this country have to be imported from abroad. Some of these are required for Canadian industrial processes and others may be classed as consumer goods necessary for the maintenance of a high standard of living.

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* Prepared in the several branches and divisions concerned and collated in the Information Branch, Department of Trade and Commerce, Ottawa.

Although many private firms have established connections in other countries that enable them to maintain a steady flow of goods in either direction, others require the assistance of government agencies in finding markets or sources of supply. Import and export controls, imposed by many countries for a variety of reasons, together with post-war foreign exchange difficulties, present problems that no single firm or even an association of manufacturers, exporters or importers can solve without assistance from government representatives.

The Department of Trade and Commerce and associated agencies are at the disposal of exporters and importers engaged directly in the development of Canada's commercial relations with other countries. Services obtainable from the various branches, divisions and agencies are described below.

Canadian Trade Commissioner Service.—The Canadian Trade Commissioner Service is one of the important instruments in the continuous effort to increase Canadian international trade, to give world-wide distribution to Canadian products and to locate the best sources of supply for imports. With headquarters at Ottawa, the Service maintains 53 offices in 43 countries, staffed with trained Canadian trade officials and commodity specialists. The work of the Trade Commissioners in the field is co-ordinated at Ottawa by four Area Trade Officers. These officers are familiar with every aspect of foreign trade in their geographical or political areas and are responsible to the Director of the Service for the collection, preparation and presentation of information on all trade matters in their respective territories.

Trade Commissioners bring together exporters and importers of Canada and other countries. They study potential markets for specific Canadian products and report on the exact kind of goods in demand, prices, competitive conditions, trade and exchange regulations, tariffs, shipping and packaging requirements, labelling, etc. Inquiries for Canadian goods are forwarded to the Department at Ottawa or directly to interested Canadian firms. For Canadian importers, Trade Commissioners seek sources of supply of a wide variety of goods. The preparation of economic and other reports for departmental use is an important activity for the Trade Commissioner, while much attention is given to the dissemination of information on the Canadian International Trade Fair, securing exhibitors and encouraging the visits of foreign buyers. Assistance is also given to Canadian exhibitors at overseas trade fairs and a constant liaison is maintained with foreign government trade departments.

In countries where Canada maintains a diplomatic mission as well as a trade office, Trade Commissioners form an integral part of the mission and assume the title of Commercial Counsellor or Commercial Secretary. In some foreign countries they act as Consuls General, Consuls or Vice-Consuls, according to their status as Foreign Service Officers.

In order to provide Canadian manufacturers, exporters and importers with up-to-date information concerning their territories more effectively than is possible by correspondence, tours of Canadian industrial centres are arranged from time to time for Trade Commissioners. Such direct contacts enable specific problems to be discussed and, at the same time, serve to bring into focus for the Trade Commissioner the Canadian industrial picture as a whole. He thus returns to his post with a knowledge of current Canadian conditions and in a better position to assist in the development and extension of Canadian trade opportunities.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD, AS AT JAN. 1, 1955

ARGENTINA.—C. S. Bissett, Commercial Counsellor, Canadian Embassy, Bartolomé Mitré 478, Buenos Aires.

AUSTRALIA.—C. M. Croft, Commercial Counsellor for Canada, City Mutual Life Bldg., 60 Hunter Street, Sydney, N.S.W.
R. W. Blake, Commercial Secretary for Canada and Agricultural Secretary, 83 William Street, Melbourne.

BELGIAN CONGO.—A. B. Brodie, Canadian Government Trade Commissioner, Forescom Building, Leopoldville. Territory includes Angola and French Equatorial Africa.

BELGIUM.—T. J. Monty, Commercial Counsellor, Canadian Embassy, 35 rue de la Science, Brussels. Territory includes Luxembourg.

BRAZIL.—C. J. Van Tighem, Commercial Secretary, Canadian Embassy, Edificio Metropole, Av. Presidente Wilson 165, Rio de Janeiro.
M. P. Carson, Consul and Trade Commissioner, Canadian Consulate, Edificio Alois, Rua 7 de Abril 252, São Paulo.

CEYLON.—James J. Hurley, High Commissioner for Canada, 6 Gregory's Road, Cinnamon Garden, Colombo.

CHILE.—R. E. Gravel, Commercial Secretary, Canadian Embassy, 6th Floor, Av. General Bulnes, 129, Santiago.

COLOMBIA.—W. J. Millyard, Commercial Secretary, Canadian Embassy, Avenida Jimenez No. 7-25, Bogota. Territory includes Ecuador.

CUBA.—G. A. Browne, Commercial Secretary, Canadian Embassy, Edificio Motor Centre, Calle Infanta 16, Havana.

DENMARK.—C. F. Wilson, Commercial Counsellor, Canadian Legation, 4 Trondhjems Plads, Copenhagen. Territory includes Greenland.

DOMINICAN REPUBLIC.—M. B. Bursey, Commercial Counsellor, Edificio Copello 408, Calle El Conde, Ciudad Trujillo. Territory includes Haiti and Puerto Rico.

EGYPT.—M. R. M. Dale, Commercial Secretary, Canadian Embassy, 6 Sharia Rouston Pasha, Garden City, Cairo. Territory includes Aden, Sudan, Cyprus, Ethiopia and Saudi Arabia.

FRANCE.—B. C. Butler, Commercial Counsellor for Canada, 3 rue Scribe, Paris. Territory includes Algeria, French Morocco, French West Africa and Tunisia.
R. Campbell Smith, Commercial Secretary for Canada, 3 rue Scribe, Paris.

GERMANY.—B. A. Macdonald, Commercial Counsellor, Canadian Embassy, 22 Zitelmannstrasse, Bonn.

GREECE.—H. W. Richardson, Commercial Secretary, Canadian Embassy, 31 Vassillissis Sophias Ave., Athens. Territory includes Israel and Turkey.

GUATEMALA.—J. C. Depocas, Canadian Government Trade Commissioner, 5a Avenida Sud, 10-68, Guatemala City. Territory includes Costa Rica, El Salvador, Honduras, Nicaragua, Panama and Canal Zone.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD—continued

Hong Kong.—T. R. G. Fletcher, Canadian Government Trade Commissioner, Hong Kong and Shanghai Banking Corporation Building, Hong Kong. Territory includes China, Indo-China, Macao and Taiwan.

India.—Richard Grew, Commercial Counsellor, Office of the High Commissioner for Canada, 4 Aurangzeb Road, New Delhi.
D. M. Holton, Commercial Secretary for Canada, Gresham Assurance House, Mint Road, Bombay.

Indonesia.—W. D. Wallace, Commercial Secretary, Canadian Embassy, Budi Krmulian No. 6, Djakarta.

Ireland.—T. Grant Major, Commercial Counsellor for Canada, 66 Upper O'Connell Street, Dublin.

Italy.—S. G. MacDonald, Commercial Counsellor, Canadian Embassy, Via Saverio Mercadante 15, Rome. Territory includes Libya, Malta and Yugoslavia.

Jamaica.—M. B. Palmer, Canadian Government Trade Commissioner, Canadian Bank of Commerce Chambers, Kingston. Territory includes Bahamas and British Honduras.

Japan.—J. C. Britton, Commercial Counsellor, Canadian Embassy, Tokyo. Territory includes Korea.
Paul Sykes, Canadian Government Trade Commissioner, 7th Floor, Crescent Building, 72 Kyomachi, Ikutaku, Kobe.

Lebanon.—G. F. G. Hughes, Commercial Secretary, Canadian Legation, Alpha Building, Rue Clemenceau, Beirut. Territory includes Iraq, Jordan and Syria.

Mexico.—M. T. Stewart, Commercial Counsellor, Canadian Embassy, Edificio Internacional, Paseo de la Reforma, Mexico, D.F.

The Netherlands.—V. L. Chapin, Commercial Secretary, Canadian Embassy, Sophialaan 1-A, The Hague.

New Zealand.—L. S. Glass, Commercial Secretary, Office of the High Commissioner for Canada, Government Life Insurance Building, Wellington. Territory includes Fiji and Western Samoa.

Norway.—J. L. Mutter, Commercial Counsellor, Canadian Legation, Fridtjof Nansens Plass 5, Oslo. Territory includes Iceland.

Pakistan.—R. K. Thomson, Commercial Secretary, Office of the High Commissioner for Canada, Hotel Metropole, Victoria Road, Karachi. Territory includes Afghanistan and Iran.

Peru.—H. J. Horne, Commercial Secretary, Canadian Embassy, Edificio Boza, Carabaya 831, Plaza San Martin, Lima. Territory includes Bolivia.

Philippines.—F. H. Palmer, Consul General of Canada and Trade Commissioner, Ayala Building, Juan Luna Street, Manila.

Portugal.—L. M. Cosgrave, Commercial Counsellor, Canadian Legation, Avenida de Praia da Vitoria 48-1°D, Lisbon. Territory includes The Azores and Madeira.

Singapore.—D. S. Armstrong, Canadian Government Trade Commissioner, Room F-3, Union Building, Singapore. Territory includes Brunei, Burma, Federation of Malaya, North Borneo, Sarawak and Thailand.

South Africa.—K. F. Noble, Canadian Government Trade Commissioner, Mutual Building, Harrison Street, Johannesburg. Territory includes Federation of Rhodesia and Nyasaland, Portuguese East Africa, Kenya, Tanganyika, Uganda and Zanzibar.
A. W. Evans, Canadian Government Trade Commissioner, Grand Parade Centre Building, Adderley Street, Cape Town. Territory includes South-West Africa, Mauritius and Madagascar.

Spain.—B. I. Rankin, Commercial Secretary, Canadian Embassy, Edificio España, Avenida de Jose Antonio 88, Madrid. Territory includes Balearic Islands, Canary Islands, Gibraltar, Rio de Oro, Spanish Morocco and Tangier.

FOREIGN TRADE SERVICE REPRESENTATIVES ABROAD—concluded

SWEDEN.—F. W. Fraser, Commercial Counsellor, Canadian Legation, Strandvagen, 7–C, Stockholm. Territory includes Finland.

SWITZERLAND.—W. Van Vliet, Commercial Secretary, Canadian Embassy, Kirchenfeldstrasse 88, Berne. Territory includes Austria, Czechoslovakia and Hungary.

TRINIDAD.—P. V. McLane, Canadian Government Trade Commissioner, Colonial Building, 72 South Quay, Port-of-Spain. Territory includes Barbados, Windward and Leeward Islands, British Guiana, Dutch Guiana, French Guiana, and French West Indies.

UNITED KINGDOM.—R. P. Bower, Commercial Counsellor, Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

(Post Vacant) Canadian Government Trade Commissioner, Martins Bank Building, Water Street, Liverpool.

T. Grant Major, Canadian Government Trade Commissioner, 36 Victoria Square, Belfast. Territory includes Northern Ireland.

UNITED STATES.—R. G. C. Smith, Commercial Counsellor, Canadian Embassy, 1746 Massachusetts Ave., N.W., Washington, D.C.

H. A. Gilbert, Commercial Secretary, Canadian Embassy, 1746 Massachusetts Ave., N.W., Washington 6, D.C.

S. V. Allen, Consul and Senior Trade Commissioner, Canadian Consulate General, 620 Fifth Avenue, New York, N.Y.

C. R. Gallow, Consul and Trade Commissioner, Canadian Consulate General, 620 Fifth Avenue, New York City 20.

D. H. Cheney, Vice Consul and Trade Commissioner, Canadian Consulate General, 532 Little Building, 80 Boylston Street, Boston 16, Mass.

R. V. N. Gordon, Vice Consul and Trade Commissioner, Canadian Consulate General, Chicago Daily News Building, 400 West Madison Street, Chicago, Ill.

M. J. Vechsler, Consul of Canada and Trade Commissioner, Canadian Consulate, 1035 Penobscot Building, Detroit 26, Mich.

Leslie G. Chance, Consul General, Canadian Consulate General, Associated Realty Building, 510 West Sixth St., Los Angeles 14, Cal.

G. A. Newman, Consul and Trade Commissioner, Canadian Consulate, 215-217 International Trade Mart, New Orleans, La.

Christopher C. Eberts, Consul General, Canadian Consulate General, 3rd Floor, Kohl Building, 400 Montgomery Street, San Francisco, Cal.

C. Norman Senior, Consul General, Canadian Consulate General, The Tower Building, 7th Ave. at Olive Way, Seattle 1, Wash.

URUGUAY.—W. Gibson-Smith, Commercial Secretary, Canadian Embassy, Calle Colonia 1013, 7° Piso, Montevideo. Territory includes Paraguay.

VENEZUELA.—H. L. Brown, Commercial Counsellor, Canadian Embassy, Edificio Pan American, Puente Urapal, Caracas. Territory includes Netherlands Antilles.

AGRICULTURAL REPRESENTATIVES

ARGENTINA.—W. F. Hillhouse, Agricultural Secretary, Canadian Embassy, Bartolomé Mitré 478, Buenos Aires. Territory includes Paraguay and Uruguay.

AUSTRALIA.—R. W. Blake, Agricultural Secretary for Canada, 83 William Street, Melbourne.

THE NETHERLANDS.—C. J. Small, Acting Agricultural Secretary, Canadian Embassy, Sophialaan 1-A, The Hague. Territory includes Belgium and Luxembourg.

UNITED KINGDOM.—D. A. B. Marshall, Commercial Secretary (Agricultural), Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

UNITED STATES.—Dr. W. C. Hopper, Agricultural Counsellor, Canadian Embassy, 1746 Massachusetts Avenue, N.W., Washington, D.C.

VENEZUELA.—D. B. Laughton, Acting Agricultural Secretary, Canadian Embassy, Edificio Pan American, Puente Urapal, Caracas. Territory includes Colombia.

FISHERIES REPRESENTATIVE

ITALY.—M. S. Strong, Commercial Secretary (Fisheries), Canadian Embassy, Via Saverio Mercadante 15, Rome.

TIMBER REPRESENTATIVE

UNITED KINGDOM.—G. H. Rochester, Commercial Secretary (Timber), Office of the High Commissioner for Canada, Canada House, Trafalgar Square, London, S.W.1.

Commodities Branch.—The Commodities Branch is responsible for maintaining the liaison with industry and with export and import trades essential to the foreign trade promotion work of the Department. The Branch assembles trade information and data on products for use by Trade Commissioners in posts abroad, and officers of the Branch maintain contact with industry through personal visits and by exchange of correspondence with this purpose in view. Through correspondence with Canadian Government Trade Commissioners abroad, officers of the Branch are able to follow conditions in foreign markets and to supply this information for the benefit of Canadian traders.

The Branch contains commodity specialists organized in three divisions: the Machinery and Metals Divison, the Forest Products and Chemicals Division, and the Consumer Goods Division. Within these Divisions, individual commodity specialists are concerned with such particular groups of products as machine tools and plant equipment, non-ferrous metals, steel, chemicals, lumber, leather and rubber, as well as a very wide range of consumer products. It is the function of the commodity specialist to call the attention of Trade Commissioners to changes in supply conditions and to products available for export. They also relay market news received from Trade Commissioners to Canadian manufacturers and exporters. Close attention is paid to developing opportunities for promoting sales abroad of Canadian products, and exporters are informed about regulations governing foreign trade.

Agriculture and Fisheries Branch.—The main functions of this Branch include: (1) trade promotion relating to agricultural and fisheries products; (2) the programming, receiving and disseminating of information on foreign agriculture and fisheries; and (3) acting as a focal point for liaison on agricultural and fisheries matters with the Department of Agriculture, the Department of Fisheries, the Canadian Wheat Board, and other government departments and boards.

In the field of trade promotion, the Grain Division and the Food and Agriculture Division assist Canadian exporters of agricultural and fisheries products in finding markets in other countries. Canadian firms are supplied with information with respect to market conditions and requirements in foreign markets, competition from other sources of supply, exchange and tariff restrictions and other related information. Canadian Trade Commissioners throughout the world are kept fully informed on such matters as production and price trends in Canada, quantities of commodities available for export and sources of supply.

The Grain Division deals specifically with matters relating to Canada's grain trade. Assistance is rendered foreign governments and other buyers in the purchase of Canadian wheat, flour and other cereals. Close contact is maintained with the flour millers as well as daily liaison with the Canadian Wheat Board.

The Commodity Officers concerned with live stock, live-stock products, meat, dairy and poultry products, fruits and vegetables, and fish and fisheries products, keep in contact with the trade and trade organizations dealing with these commodities. They are in close touch with the officers of other departments of government concerned with the disposition of Canadian production surplus to domestic requirements, and who are responsible for such items as health standards, grading and inspection.

A great deal of information pertaining to foreign agriculture and fisheries is received from the Canadian Trade Commissioners. This material, which reflects foreign government policy, production trends and market information, is processed in the Branch and distributed to the departments of government concerned and others interested. Much of it is published in *Foreign Trade.* The Trade Commissioner Service includes a number of officers who deal specifically with agricultural and fisheries matters. Some of these officers are located in Canada's most important export outlets and others in those countries with which Canada competes on world markets, particularly in such commodities as wheat, coarse grains, live stock, meats and dairy products. The information received from the agricultural officers and other Trade Commissioners on foreign agricultural developments is distributed in Canada through publications issued by the Economics Division of the Department of Agriculture and by direct communication with producers and exporters. Fisheries information from abroad is passed immediately to the Department of Fisheries, the provincial departments concerned, the Fisheries Council, and to fish exporters.

International Trade Relations Branch.—This Branch deals with a wide variety of current trade issues, ranging from the analysis of developments in international commercial relations to assisting in the reopening of dollar markets for Canadian products in Europe and to finding practical solutions for tariff difficulties encountered by Canadian exporters. The Branch has under constant review Canada's trading relations with other countries, and studies the effects of the work of such international organizations as the European Payments Union and the Organization for European Economic Co-operation on Canadian and world trade.

Trade treaties are under continuous examination by the Branch, which is responsible for the preparation of material for trade and tariff negotiations with other countries. Material is collected on foreign tariffs, customs legislation, taxes affecting trade, import licensing, exchange regulations, documentation, sanitation, marking and labelling requirements, and measures pertaining to quotas, embargoes and other import restrictions. These data are analysed, interpreted, clarified and made available in easily comprehensible form to exporters, government officials and other export interests.

Exporters who encounter difficulties resulting from the trade policies or regulations of other countries are given expert advice and interpretations of foreign regulations. Also, the Branch initiates official consultations with other governments respecting such problems.

Economics Branch.—The Economics Branch maintains a continuous review of business conditions in Canada and conducts special studies on particular industries or on any aspect of Canada's economic development, as required. Aspects of the general economic situation considered include foreign trade, investment, consumption, production, prices, incomes and employment, as well as conditions in industries and localities.

Industrial Development Branch.—This Branch co-ordinates the assistance offered by the Federal Government in the establishment of new industries in Canada. Acting in this capacity, information is provided on a multiplicity of matters pertaining to industry establishment and assists in solving the variety of problems encountered by Canadian and foreign businessmen.

The Branch also aids those established firms that wish to expand into new lines of production. Inquiries from foreign firms and individuals regarding the manufacture of products in Canada under licence or royalty are screened and brought to the attention of Canadian manufacturers interested in producing additional items.

The Branch acts in an advisory capacity to the Immigration Branch of the Department of Citizenship and Immigration regarding the admission of individuals, other than those from Commonwealth countries and the United States, who wish to establish new industries in Canada. It also works in close co-operation with a widespread network of organizations throughout Canada, including industrial development departments of the provinces, municipalities, railways, banks, power companies, chambers of commerce, boards of trade, and the Canadian Manufacturers' Association.

Information Branch.—The principal function of the Information Branch is to furnish the commercial community of Canada with information concerning the assistance that exporters and importers may obtain from the Department of Trade and Commerce. The Branch is responsible also for stimulating a better appreciation by the general public of the importance of trade to the welfare of Canada. The attention of exporters and potential exporters is directed to opportunities for the disposal of their products in markets abroad, and of importers to the sources of supply for raw materials and consumer goods unobtainable in Canada. Its principal educational and informative medium is *Foreign Trade,* fortnightly publication of the Foreign Trade Service, in which are reproduced reports of Canadian Trade Commissioners on conditions in their respective territories, articles by Head Office personnel and economists of the Dominion Bureau of Statistics, news items and charts portraying trade trends. Press releases are prepared and distributed to newspapers at home, and material of a similar character dispatched to Canadian Trade Commissioners for distribution to newspapers abroad. Pamphlets and brochures are prepared to supplement other information on foreign markets, sources of supply, documentation, regulations and trade restrictions. Assistance is rendered to correspondents of newspapers and periodicals at home and abroad in the preparation of articles pertaining to various phases of Canada's foreign trade. The educational and promotional work of this Branch is supported by moderate advertising at home and abroad, through the daily press, periodicals and trade papers as well as films and radio.

Canadian Government Exhibition Commission.—The Canadian Government Exhibition Commission publicizes Canada by graphic media of all kinds and helps to sell Canadian products abroad. The Commission is solely responsible for the construction and administration of Federal Government exhibits at international expositions, trade fairs and displays outside Canada and of international trade fairs in Canada sponsored by the Government of Canada. The Commission's first fulfilment of the latter responsibility was the inauguration of the Canadian International Trade Fair, held annually at Toronto since 1948.

The Commission also co-operates with Canadian exporters in securing representation for goods at trade fairs and trade promotional displays, and is equipped to advise individual Canadian companies in the preparation of exhibits. It distributes, at its various presentations, literature produced by other government departments and agencies.

Export Credits Insurance Corporation.—The Export Credits Insurance Corporation was established under the provisions of the Export Credits Insurance Act, 1944, and as amended in August 1946, May 1948, and March 1954. The Corporation, which is administered by a board of directors including the Deputy Minister of Trade and Commerce, the Deputy Minister of Finance and the Governor of the Bank of Canada, insures exporters against losses arising from credit and political risks involved in the export or in an agreement for the export of goods. Policies are generally issued on a yearly basis, covering exporters' sales to all countries. The main risks covered include: insolvency or protracted default on the part of the buyer; exchange restrictions in the buyer's country preventing the transfer of funds to Canada; cancellation of an import licence or the imposition of restrictions on the importation of goods not previously subject to restrictions; the occurrence of war between the buyer's country and Canada, or of war, revolution, etc., in the buyer's country.

The insurance is available under two main classifications—general commodities and capital goods. Coverage for general commodities can be procured by exporters under two types of policies: (1) the Contracts Policy, which insures an exporter against loss from the time he books the order until payment is received; or (2) the Shipments Policy, obtainable at lower rates of premium and covering the exporter from the time of shipment until payment is received.

Insurance of capital goods offers protection to exporters dealing in plant equipment, heavy machinery, etc., where extended credit for lengthy periods is often necessary. Specific policies are issued for transactions involving capital goods but the general terms and conditions are the same as those applicable to policies for general commodities.

The Corporation insures exporters on a co-insurance basis up to a maximum of 85 p.c. of the gross invoice value of shipments. This co-insurance basis also operates in the distribution of recoveries obtained after payment of a loss, and these recoveries are shared by the Corporation and the exporter in the proportions of 85 and 15 p.c., respectively.

The Corporation, from its inception to Dec. 31, 1953, issued policies having a total value of $432,781,526. Claims paid to exporters during the same period amounted to $3,888,180. A large majority of these claims resulted from exchange transfer difficulties, with relatively few arising from insolvencies. Recoveries made amounted to $1,716,829. Excess of income over expenditure to Dec. 31, 1953, was $1,068,112, which was added to the Corporation's underwriting reserve.

International Economic and Technical Co-operation Division.—The administration of Canada's participation in the Colombo Plan—a Commonwealth effort to help the peoples of South and Southeast Asia to raise their standards of living and productivity—is the responsibility of this Division. This contribution is of two types—capital aid and technical co-operation. Under capital assistance, grants of goods or services are made to countries in the area on a government-to-government basis. Technical co-operation embraces the training of Asian peoples in a variety of fields in Canada and the supplying of Canadian experts to advise and instruct abroad. The Division also assists the United Nations and its specialized agencies in the recruiting of technical experts and in the arrangement of courses of instruction for trainees sent to Canada for study. For the year ended Mar. 31, 1954, $25,000,000 was voted by Parliament for capital aid and an additional $400,000 was provided for the Colombo Plan technical co-operation program.

Section 2.—The Development of Tariffs

A short sketch of trade and tariffs prior to Confederation is given in the 1940 Year Book, pp. 480-482. The 1942 Year Book, pp. 427-428, traces the development from Confederation to the adoption in 1904 of the present form of preferential tariff.

Owing to the limitations of space in the Year Book, it has been necessary, in regard to tariffs, to adopt the policy of confining any detail regarding commodities and countries to tariff relationships in force at present and to summarize as much as possible historical data and details of preceding tariffs, giving references to those editions of the Year Book where extended treatments may be found.

Subsection 1.—The Canadian Tariff Structure*

The Canadian Tariff consists, in the main, of three sets of tariff rates—British Preferential, Most-Favoured-Nation and General.

The British Preferential Tariff rates are, with some exceptions, the lowest rates. They are applied to imported dutiable commodities shipped direct to Canada from countries of the Commonwealth and from the British colonies and other dependent overseas territories. Some Commonwealth countries have trade agreements with Canada which provide for rates of duty, on certain specified goods, lower than the British Preferential rates.

The Most-Favoured-Nation rates are usually higher than British Preferential rates. They are applied to dutiable commodities imported from countries outside the Commonwealth with which Canada has made trade agreements. The rates are usually lower than the General Tariff rates. Under trade agreements made with various countries, rates of duty lower than the Most-Favoured-Nation rates may be applied to goods from those countries. The most important trade agreement concerning the effective rates applied to goods imported from countries entitled to Most-Favoured-Nation rates is the General Agreement on Tariffs and Trade.

The General Tariff rates are applied to goods imported from the few countries with which Canada has not made trade agreements.

There are numerous goods which are duty free under the British Preferential Tariff, or under both the British Preferential and Most-Favoured-Nation Tariff, or under all Tariffs.

Valuation.—Sect. 35 of the Customs Act provides that, when any *ad valorem* duty is imposed, the value of the goods for purposes of calculating the duty "shall be the fair market value of such or the like goods when sold for home consumption in the ordinary course of trade under fully competitive conditions, in like quantities and under comparable conditions of sale, etc." or, the price for which the goods were sold to the purchaser in Canada, whichever is the greater. There are further provisions for determining the value for duty when the fair market value cannot be found. Internal taxes in the country of export, the cost of shipping the goods to Canada, and similar charges, however, are not included in the value for duty.

Dumping.—Sect. 6 of the Customs Tariff provides that when the actual selling price of goods being imported is less than their fair market value, and the goods are of a class or kind made or produced in Canada, a special or dumping duty shall be collected. This duty is to be equal to the difference between the actual selling price and the fair market value of the goods, except that it may not be more than 50 p.c. of the value for duty. These provisions are designed to offset the advantage foreign exporters may achieve by exporting to Canada at less than the going prices.

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* The schedules and rates in force at any particular time may be obtained from the Department of National Revenue, Ottawa, which is responsible for administering the Canadian Tariff.

Drawback.—There are provisions in the Customs Tariff for the repayment of a portion of the duty paid on imported materials used in the manufacture of products later exported. The purpose of these drawbacks (as these repayments of duty are called) is to assist Canadian manufacturers to compete with foreign producers of similar goods. A second class of drawback, known as "home consumption" drawbacks, applies to imported materials and parts in the production of specified goods to be consumed in Canada.

The Tariff Board.—The Tariff Board, constituted by the Tariff Board Act, 1931, consists of three members, one of whom is chairman and another vice-chairman. The duties and powers of the Board derive from three Statutes of Canada: the Tariff Board Act, the Customs Act, and the Excise Tax Act.

Under the Tariff Board Act, the Board makes inquiry into and reports upon any matter in relation to goods that, if brought into Canada or produced in Canada, are subject to or exempt from duties of customs or excise and on which the Minister of Finance desires information. The investigation into any such matter may include inquiry as to the effect that an increase or decrease of the existing rate of duty upon a given commodity might have upon industry or trade and the extent to which the consumer is protected from exploitation. It is also the duty of the Board to inquire into any other matter in relation to the trade and commerce of Canada that the Governor in Council sees fit to refer to the Board for inquiry and report. Usually the references take one of two forms: authority for review of sections of the Customs Tariff relating to an entire industry, or for investigation in respect of specified commodities. Reports are tabled in Parliament.

Under the provisions of the Customs Act and the Excise Tax Act, the Tariff Board is authorized to act as a tribunal to hear appeals from rulings of the Department of National Revenue in respect of matters of administration including those of excise taxes, tariff classification, value for duty, and drawback of customs duties. Declarations of the Board on appeals on questions of fact are final and conclusive, with provision for appeal on questions of law to the Exchequer Court of Canada. Tariff references and appeals receive public hearings at which interested parties submit oral statements and written briefs relating to matters under consideration.

Subsection 2.—Tariff and Trade Arrangements with other Countries, as at June 1, 1954

Canada's tariff arrangements with other countries fall into three main categories: trade agreements with a number of Commonwealth countries; the General Agreement on Tariffs and Trade (GATT); and other agreements and arrangements.

The Commonwealth countries with which Canada has trade agreements are as follows: Australia, British West Indies, Ceylon, Ireland, New Zealand, Union of South Africa, and the United Kingdom and Colonies. These agreements have been modified and supplemented by the GATT. Preferential arrangements are also in force with respect to Southern Rhodesia, India and Pakistan.

Canada exchanges most-favoured-nation treatment with 34 countries under the General Agreement on Tariffs and Trade. The Protocol of Provisional Application of the General Agreement on Tariffs and Trade was signed by Canada on Oct. 30, 1947, and brought the Agreement into force on Jan. 1, 1948.

The GATT is a multilateral trade agreement and the most-favoured-nation rates of duty bound under it apply equally to all signatories. The Agreement consists of three parts: the general provisions related to the schedules of tariff concessions and the exchange of most-favoured-nation treatment; the provisions relating to a code of regulations for conducting international trade; and the administrative provisions of the Agreement.

Under the new system of multilateral tariff negotiations, initiated under the GATT, three conferences have taken place: at Geneva, Switzerland, in 1947; at Annecy, France, in 1949; and at Torquay, England, in 1950-51. The tariff concessions Canada granted and received at the Geneva Conference are described in the 1948-49 Year Book, pp. 875-877, and those negotiated at Annecy are discussed in the 1950 Year Book, pp. 968-970. The Torquay negotiations were discussed in the 1952-53 edition, pp. 996-997. The existing tariff concessions remain in force until June 30, 1955, and, thereafter, unless modified in accordance with the terms of the Agreement.

Canada already had most-favoured-nation trade agreements with a number of GATT members prior to the effective date of the General Agreement. These agreements with individual countries continue in force in conjunction with the General Agreement. As an exception, however, the Canada-U.S. Trade Agreement of 1938 is suspended for so long as both countries continue to be contracting parties to GATT.

Tariff and Trade Arrangements with Commonwealth Countries, as at June 1, 1954

Country	Agreement	Terms
AUSTRALIA	Trade Agreement signed July 8, 1931; in force Aug. 3, 1931. GATT effective Jan. 1, 1948.	Agreement includes schedules of tariff rates and exchange of British preferential rates on items not scheduled. May be terminated on six months notice.
BRITISH WEST INDIES (BAHAMAS, BARBADOS, BRITISH HONDURAS, JAMAICA, LEEWARD AND WINDWARD ISLANDS, TRINIDAD AND TOBAGO), BERMUDA AND BRITISH GUIANA.	Trade Agreement signed July 6, 1925, in force Apr. 30, 1927; Canadian notice of termination of Nov. 23, 1938, was replaced by notice of Dec. 27, 1939, which continued the Agreement. The British West Indies, with the exception of Jamaica, are contracting parties to GATT.	The parties exchange specified tariff preferences. Agreement may be terminated on six months notice.
CEYLON	Ceylon is a party to the Trade Agreement of 1937 between United Kingdom and Canada. GATT effective July 29, 1948.	Canada and Ceylon exchange preferential tariff treatment.

Tariff and Trade Arrangements with Commonwealth Countries, as at June 1, 1954—concluded

Country	Agreement	Terms
INDIA	Since 1897, Canada has unilaterally accorded British preferential treatment to India but without contractual obligation. GATT effective July 8, 1948.	
IRELAND	Trade Agreement signed Aug. 20, 1932; in force Jan. 2, 1933.	Canada grants British preferential tariff in return for preferential rates where such exist and for most - favoured-nation rates on non-preferential items. May be terminated on six months notice.
NEW ZEALAND	Trade Agreement signed Apr. 23, 1932; in force May 24, 1932. GATT effective July 26, 1948.	The parties exchange specific preferences on scheduled goods and reciprocally concede British preferential rates on items not scheduled. May be terminated on six months notice.
PAKISTAN	Canada unilaterally accords Pakistan British preferential treatment but without contractual obligation. GATT effective July 30, 1948.	
SOUTHERN RHODESIA	Trade Agreement of Aug. 20, 1932, was terminated on Jan. 2, 1938, on notice from Southern Rhodesia. Tariff treatment established therein continues to be reciprocally accorded. GATT effective May 19, 1948.	Canada grants British preferential treatment and Southern Rhodesia extends tariff preferences granted to Commonwealth countries other than the United Kingdom.
UNION OF SOUTH AFRICA.	Trade Agreement signed Aug. 20, 1932; in force Oct. 13, 1932.	Agreement includes schedules of tariff preferences granted by each country. May be terminated on six months notice.
	Exchange of notes Aug. 2-31, 1935; effective retroactive from July 1, 1935. GATT effective June 14, 1948.	Exchange of most - favoured - nation treatment. May be terminated on six months notice.
UNITED KINGDOM	Trade Agreement signed Feb. 23, 1937; in force Sept. 1, 1937. Modified by an exchange of letters of Nov. 16, 1938, and an exchange of notes Oct. 30, 1947. GATT effective Jan. 1, 1948.	Various concessions by both countries including exchange of preferential tariff rates (some minor reservations by Canada). Extends to Colonial Empire.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1954

ARGENTINA	Trade Agreement signed Oct. 2, 1941; provisionally in force Nov. 15, 1941.	Exchange of most - favoured - nation treatment. Provisional application may be terminated on three months notice.
AUSTRIA	GATT effective Oct. 19, 1951.	

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1954—continued

Country	Agreement	Terms
BENELUX (BELGIUM, LUXEMBOURG AND THE NETHERLANDS).	Convention of Commerce with Belgium (including Luxembourg and Belgian colonies) entered into effect Oct. 22, 1924. The Convention was suspended during the War but reinstated by exchange of notes Feb. 1 and 5, 1946; includes Netherlands Antilles and Surinam. GATT covering Benelux as a whole effective Jan. 1, 1948.	Exchange of most-favoured-nation tariff treatment. May be terminated on a one-year notice.
BOLIVIA...............	Order in Council of July 20, 1935, accepted Article 15 of the United Kingdom — Bolivia Treaty of Commerce of Aug. 1, 1911.	Exchange of most-favoured-nation treatment. May be terminated on a one-year notice.
BRAZIL...............	Trade Agreement signed Oct. 17, 1941; provisionally in force from date of signing and definitively on Apr. 16, 1943. GATT effective July 31, 1948.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
BURMA...............	GATT effective July 29, 1948.	
CHILE...............	Trade Agreement signed Sept. 10, 1941; in force provisionally Oct. 15, 1941, and definitively on Oct. 29, 1943. GATT effective Mar. 16, 1948.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
CHINA...............	*Modus vivendi* signed Sept. 26, 1946; in effect since Sept. 28, 1946. China withdrew from GATT on May 5, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
COLOMBIA............	Treaty of Commerce with United Kingdom of Feb. 16, 1866, applies to Canada. Modified by protocol of Aug. 20, 1912, and exchange of notes Dec. 30, 1938. A Trade Agreement between Colombia and Canada was signed Feb. 20, 1946, but has not been put into force.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
COSTA RICA..........	*Modus vivendi* signed Nov. 18, 1950; brought into force Jan. 26, 1951.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
CUBA...............	GATT effective Jan. 1, 1948.	
CZECHOSLOVAKIA......	Convention of Commerce signed Mar. 15, 1928; in force Nov. 14, 1928. GATT effective May 21, 1948.	Exchange of most-favoured-nation treatment. May be terminated on a one-year notice.
DENMARK (including GREENLAND).	Treaties of Peace and Commerce with United Kingdom of Feb. 13, 1660, and July 11, 1670, apply to Canada. GATT effective May 28, 1950.	Exchange of most-favoured-nation treatment. Declaration of May 9, 1912, provides means for separate termination by Dominions on a one-year notice.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1954—continued

Country	Agreement	Terms
DOMINICAN REPUBLIC.	Trade Agreement signed Mar. 8, 1940; in force provisionally Mar. 15, 1950, and definitively Jan. 22, 1941. GATT effective May 19, 1950.	Exchange of most-favoured-nation treatment including scheduled concessions. May be terminated on six months notice.
ECUADOR	*Modus vivendi* signed Nov. 10, 1950; in force Dec. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
EGYPT	Exchange of notes Nov. 26 and Dec. 3, 1952; in force Dec. 3, 1952.	Exchange of most-favoured-nation rates. May be terminated on six months notice.
EL SALVADOR	Exchange of notes of Nov. 2, 1937; in force Nov. 17, 1937.	Exchange of most-favoured-nation treatment. May be terminated on four months notice.
FINLAND	Exchange of notes of Nov. 13-17, 1948; effective Nov. 17, 1948. GATT effective May 25, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
FRANCE AND FRENCH OVERSEAS TERRITORIES.	Trade Agreement signed May 12, 1933; in force June 10, 1933. Exchange of notes of Sept. 29, 1934, and additional protocol of Feb. 26, 1935. GATT effective Jan. 1, 1948.	Exchange of most-favoured-nation treatment including scheduled concessions. May be terminated on three months notice.
WESTERN GERMANY	GATT effective Oct. 1, 1951.	
GREECE	*Modus vivendi* by exchange of notes of July 24-28, 1947; effective Aug. 28, 1947. GATT effective Mar. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
GREENLAND	(*See* Denmark.)	
GUATEMALA	Trade Agreement signed Sept. 28, 1937; in force Jan. 14, 1939.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
HAITI	Trade Agreement signed Apr. 23, 1937; in force Jan. 10, 1939. GATT effective Jan. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
ICELAND	Although there is no contractual obligation, Canada and Iceland adhere to the terms of a treaty originally concluded between Denmark and the United Kingdom on Feb. 13, 1660.	Exchange of most-favoured-nation treatment.
INDONESIA	GATT effective Mar. 1, 1948.	
IRAN	Special arrangement by Order in Council effective Feb. 1, 1951.	Canada grants most-favoured-nation tariff rates as long as Iran accords reciprocal treatment.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1954—continued

Country	Agreement	Terms
IRAQ	Special arrangement by Order in Council effective Sept. 15, 1951.	Canada grants and receives most-favoured-nation tariff rates.
ISRAEL	Canada-United Kingdom Agreement of 1937 applied under the British Palestine Mandate. Since the creation of the State of Israel in May 1948, Canada has continued to grant most-favoured-nation rates.	
ITALY	*Modus vivendi* by exchange of notes of Apr. 23–28, 1948; effective Apr. 28, 1948. GATT effective Jan. 1, 1950.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
JAPAN	Agreement on Commerce, signed Mar. 31, 1954; effective on ratification. Not yet ratified (June 1, 1954).	Exchange of most-favoured-nation treatment. Remains in force for one year from ratification and thereafter unless terminated on three months notice.
KOREA	Participated in Torquay negotiations but has not yet (June 1, 1954) become a Contracting Party to GATT.	
LEBANON	Special arrangement by Order in Council of Nov. 19, 1946. Lebanon withdrew from GATT Mar. 1, 1951.	Canada grants most-favoured-nation tariff rates as long as Lebanon accords reciprocal treatment.
LIBERIA	GATT effective Jan. 1, 1950.	
MEXICO	Trade Agreement signed Feb. 8, 1946; in force provisionally same date. Ratifications exchanged on May 6, 1947; definitively in force 30 days from that date.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
NICARAGUA	Trade Agreement signed Dec. 19, 1946; in force provisionally same date. GATT effective May 28, 1950.	Exchange of most-favoured-nation treatment. Provisional application may be terminated on three months notice.
NORWAY	Convention of Commerce and Navigation with United Kingdom of Mar. 18, 1826, applied to Canada. GATT effective July 10, 1948.	Exchange of most-favoured-nation treatment. Convention of May 16, 1913, provides means for separate termination by Dominions on a one-year notice.
PANAMA	Order in Council of July 20, 1935, accepted Article 12 of United Kingdom-Panama Treaty of Commerce of Sept. 25, 1928. Treaty terminated in 1942 but Canada continues to grant and receive most-favoured-nation tariff rates.	
PARAGUAY	Exchange of notes of May 21, 1940; in force June 21, 1940.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1954—continued

Country	Agreement	Terms
Peru	GATT effective Oct. 8, 1951.	
Philippines	No agreement at present. United States - Canada Agreement of 1938 (now suspended) applied to Philippines until Philippines attained independence in 1946. Canada and Philippines have continued to exchange most-favoured-nation treatment. Participated in Torquay negotiations but has not yet (June 1, 1954) become a Contracting Party to GATT.	June 1, 1954
Poland	Convention of Commerce signed July 3, 1935; in force Aug. 15, 1936.	Exchange of most - favoured - nation treatment including scheduled reductions. May be terminated on three months notice.
Portugal, Portuguese Adjacent Islands and Portuguese Overseas Provinces.	Trade Agreement signed May 28, 1954, provisionally in effect July 1, 1954, definitively in force on ratification; not yet ratified (June 1, 1954).	Exchange of most - favoured-nation treatment. Remains in effect for two years from ratification and thereafter unless terminated on three months notice.
Spain and Spanish Possessions.	Since Aug. 1, 1928, Canada has adhered to the United Kingdom-Spain Treaty of Commerce of Oct. 31, 1922.	Exchange of most - favoured - nation treatment. May be terminated on six months notice.
	Trade Agreement signed May 26, 1954, provisionally in effect July 1, 1954, definitively in force on ratification; not yet ratified (June 1, 1954).	Supplements and amends United Kingdom - Spanish Treaty of Commerce. Remains in effect for three years from ratification, and thereafter unless terminated on three months notice.
Sweden	United Kingdom-Sweden Convention of Commerce and Navigation of Mar. 18, 1826, applies to Canada. GATT effective May 1, 1950.	Exchange of most - favoured - nation treatment. Declaration of Nov. 27, 1911, provides means for separate termination by Dominions on a one-year notice.
Switzerland	United Kingdom - Switzerland Treaty of Friendship, Commerce and Reciprocal Establishment of Sept. 6, 1855, applies to Canada. By exchange of notes Liechtenstein included under terms of this agreement, effective Aug. 2, 1947.	Exchange of most - favoured - nation treatment. Convention of Mar. 30, 1914, provides means for separate termination by the Dominions on a one-year notice.
Syria	Special Arrangement by Order in Council of Nov. 19, 1946. Syria withdrew from GATT Aug. 6, 1951.	Canada grants most - favoured - nation tariff rates as long as Syria accords reciprocal treatment.

Tariff and Trade Arrangements with Non-Commonwealth Countries, as at June 1, 1954—concluded

Country	Agreement	Terms
TURKEY	Exchange of notes signed Mar. 1, 1948; in effect Mar. 15, 1948. GATT effective Oct. 17, 1951.	Exchange of most-favoured-nation treatment. May be terminated on three months notice.
UNITED STATES	Trade Agreement signed Nov. 17, 1938, suspended as long as both countries continue to be contracting parties to GATT. GATT effective Jan. 1, 1948.	
URUGUAY	Trade Agreement signed Aug. 12, 1936, in force May 15, 1940. Additional Protocol signed Oct. 19, 1953, not yet ratified (June 1, 1954). GATT effective Dec. 16, 1953.	Exchange of most-favoured-nation treatment. May be terminated on six months notice.
VENEZUELA	*Modus vivendi* signed and brought into force Oct. 11, 1950; renewed each year.	Exchange of most-favoured-nation treatment. Made for one year subject to annual renewal.
YUGOSLAVIA	Trade Agreements Act of June 11, 1928, accepted Article 30 of United Kingdom-Serb-Croat-Slovene Treaty of Commerce and Navigation of May 12, 1927; in force Aug. 9, 1928.	Exchange of most-favoured-nation treatment. May be terminated on a one-year notice.

CHAPTER XXIII.—PRICES*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Index Numbers of Wholesale Prices

Wholesale prices are not restricted in this Chapter to the normal meaning of that word but may be conceived as applying to the sale of commodities in large quantities. They may include price quotations ranging from those paid by primary producers for basic raw materials to prices paid by retailers for finished articles. Within this broad group, numerous sub-classifications are available, such as component material, degree of manufacture and special-purpose series. Wholesale prices are frequently very sensitive to changing conditions and are often used to gauge the economic effect of events as well as to forecast retail price changes. An example of this is the price increase that followed the outbreak of hostilities in Korea in 1950.

A new series of wholesale price index numbers, related to the base period 1935-39, was introduced in January 1951. Background material concerning the construction of this index is available in DBS Reference Paper No. 24, *Wholesale Price Indexes, 1913-1950.*

Wholesale price index numbers in Canada cover the period dating from Confederation in 1867. An intermittent decline characterized the first 30 years of this interval but, from an average of 56·8 in 1897, the general wholesale index (1935-39 = 100) advanced without appreciable interruption to 83·9 in July 1914. By November 1918, this index had reached 173·1 and continued upward to a post-war inflationary peak of 214·2 in May 1920. The subsequent deflationary period lasted about two years, and between 1922 and 1929 price levels remained comparatively stable. Annual averages in this interval held between a high of 133·8 for 1925 and 124·6 for 1929. For the four years following 1929, depressionary influences were so severe that prices fell almost to the level of those of 1913. In February 1933, the wholesale index touched an extreme low of 82·8 before turning upward again.

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* Revised in the Prices Section, Labour and Prices Division, Dominion Bureau of Statistics.

Irregular recovery then continued until 1937, but the highest point reached, 110·6 in July 1937, was substantially below the 1926 average. The collapse of the wheat market in 1938, together with a fairly general depression in other markets, carried wholesale price levels just prior to the outbreak of war in 1939 down to about 15 p.c. above the 1913 level. The August 1939 index of 95·6 marked the extreme low of a two-year decline. The movement of prices prior to the outbreak of World War I was very different from that which preceded World War II. The relatively low level of prices in August 1939 probably influenced the sharper initial advance at the outbreak of war. However, during 1940, price levels steadied and showed no sign of a steep increase until 1941. By that time, great expansion in wartime production had made serious inroads into stocks of nearly all basic commodities and, at the end of 1941, wheat remained the only important commodity for which stocks exceeded predictable requirements. The introduction of general price control in December 1941 ended a year in which wholesale prices had advanced 10 p.c. as compared with about 3 p.c. in 1940. The effectiveness of price control is indicated by the fact that increases in wholesale prices amounted to only 3·1 p.c. and 5·2 p.c. during the years 1942 and 1943, respectively, and the December 1944 index was slightly below the December 1943 figure. The December 1945 index of 132·9 was 10 p.c. above that for December 1941, when price control became generally effective.

The precipitous advance in United States general wholesale prices that began during the latter half of 1946 was of great concern to Canadian price-control authorities. The advance had been anticipated in July 1946, when the Canadian dollar was returned to par with the United States dollar, thus reducing the Canadian dollar cost of imports from the United States. This provided a buffer of 10 p.c. only and the rise in United States prices was greater than that on a majority of imported articles so that continuous pressure was felt, especially among individual items. The Canadian general wholesale price index rose from 132·3 to 142·5, an increase of over 8 p.c. between May 1945 and December 1946.

The Canadian price rise accelerated in 1947 as internal controls continued to be relaxed. The monthly general wholesale index advanced without interruption from 142·5 at December 1946 to 179·9 at December 1947, an increase of 26 p.c. The rise carried through into 1948, although at a decreasing rate, and by December the index had reached a level of 202·0. Wholesale price levels during 1949 were generally stable, then rose slightly during the first five months of 1950 to reach an index level of 204·7 by May. In June, a sharp gain to 209·2 occurred, owing mainly to rapidly advancing prices for live stock, lumber, iron and steel products and non-ferrous metals. An important factor stimulating further advance was the outbreak of war in Korea. The effect on basic commodities originating in or near that area was particularly sharp and by the end of the year the index had risen to 225·2.

In 1951, the index reached new peak levels, culminating in an all-time high of 243·7 in July. This trend was reversed in the second half of the year when the index declined steadily, reflecting marked recessions in animal products and textile products. The December 1951 index at 237·7, however, was still 5·6 p.c. above December 1950.

The downward movement continued throughout the first 10 months of 1952, the total index standing at 220·2 for October. Declines were recorded by most of the main commodity groups, although an upward trend was still apparent in iron and steel products and non-metallic mineral products.

During the period October 1952 to October 1953 the total index changed by only 0·2 points from 220·2 to 220·4 as an increase in the animal products group and continued increases in iron and steel products and non-metallic mineral products offset declines in all other groups. Rather widespread decreases between October 1953 and December 1954 moved the total index down 5·1 points to 215·3, 11·7 p.c. below the peak figure of July 1951. All groups, except non-ferrous metals and chemicals which rose about 1 p.c., contributed to this decline.

1.—Annual Index Numbers of Wholesale Price Groups, 1945-54, and Monthly Indexes, 1953 and 1954

(1935–39=100)

Year and Month	General Whole-sale	Raw and Partly Manu-factured Goods	Fully and Chiefly Manu-factured Goods	Indus-trial Materials	Canadian Farm Products[1]		
					Field	Animal	Total
1945	132·1	136·2	129·8	143·2	162·5	170·2	166·4
1946	138·9	140·1	138·0	148·6	177·9	181·2	179·5
1947	163·3	164·3	162·4	187·0	184·1	200·2	192·2
1948	193·4	196·3	192·4	222·7	200·6	263·7	232·1
1949	198·3	197·1	199·2	218·0	191·9	265·4	228·7
1950	211·2	212·8	211·0	244·6	191·9	281·4	236·7
1951	240·2	237·9	242·4	296·1	200·4	336·9	268·6
1952	226·0	218·7	230·7	252·6	223·0	277·5	250·2
1953	220·7	207·0	228·8	232·3	178·1	263·8	220·9
1954	217·0	204·8	224·2	223·7	162·6	256·2	209·4
1953							
January	221·5	209·3	228·7	240·2	201·6	266·4	234·0
February	221·1	208·0	228·8	238·4	196·6	263·1	229·9
March	221·9	209·9	229·2	237·5	191·9	264·3	228·1
April	219·5	205·6	227·8	232·9	187·6	255·8	221·7
May	220·0	206·4	228·2	234·2	185·2	263·2	224·2
June	221·5	207·2	230·2	234·0	184·5	268·7	226·6
July	221·0	207·2	229·3	231·7	187·7	265·3	226·5
August	222·2	210·1	229·7	231·4	164·3	269·9	217·1
September	221·2	207·1	229·8	228·8	161·0	263·7	212·4
October	220·4	205·0	228·8	227·0	158·8	265·3	212·0
November	218·7	203·3	228·0	225·8	158·7	258·0	208·4
December	219·0	204·4	227·6	225·8	158·9	261·6	210·2
1954							
January	219·8	206·5	227·8	224·1	159·4	266·3	212·9
February	219·0	205·1	227·3	223·6	160·0	264·7	212·3
March	218·6	204·3	226·9	222·8	158·3	262·0	210·2
April	217·9	205·7	225·1	223·9	157·6	260·4	209·0
May	218·2	207·5	224·5	224·2	158·2	268·0	213·1
June	217·8	206·7	224·5	223·9	158·9	267·3	213·1
July	217·4	207·4	223·6	224·2	173·6	262·1	217·8
August	215·8	204·9	222·3	222·1	167·6	248·2	207·9
September	215·3	202·9	222·6	221·7	162·6	245·5	204·1
October	214·3	201·4	221·8	223·3	161·8	240·5	201·1
November	214·8	202·1	222·2	224·1	164·0	243·6	203·8
December	215·3	203·4	222·3	224·0	163·5	245·9	204·7

[1] The wheat prices used in these indexes are prices currently effective for Manitoba Nos. 1, 2 and 3 Northern at Fort William. Participation payments are included and the series revised whenever such figures are announced. Between August 1945 and July 1950, the price included in the index for No. 1 Manitoba Northern was $1.83 per bu. For the crop year Aug. 1, 1950–July 31, 1951, the price included was $1.85 per bu. For the crop year Aug. 1, 1951–July 31, 1952, the price was $1.83 per bu. For the crop year Aug. 1, 1952–July 31, 1953, the price was $1.82 per bu. The initial payment for the 1953–54 crop year is $1.40 per bu. Final payments for the crop year Aug. 1, 1953–July 31, 1954, were announced on Oct. 12 and Oct. 29, 1954, for barley and oats, respectively. Commencing Aug. 1, 1949, western oats and barley were brought under control of the Canadian Wheat Board. Prices used for Canadian farm products since that time have been initial payments to farmers. Participation payments are included whenever they are announced.

Residential Building Materials.—In March 1949, a series of index numbers of residential building material prices (basis: 1935-39 = 100) was established to meet the need for a more precise measurement of material components of residential construction. A description of the index together with a record back to 1926 is given in DBS bulletin, *Price Index Numbers of Residential Building Materials 1926 to 1948.*

The slow decline in residential building material prices which commenced in the final quarter of 1951 continued through the following three years. This change is illustrated by the composite index which, after touching a post-war peak of 290·8 in September and October 1951, subsequently dropped to 283·3 in December 1952. By March 1953, a slight recovery to 284·7 had taken place, but the index dropped again to reach 278·7 by December 1954. Among the various components, lower prices were most apparent in lumber products, electrical equipment, and plumbing and heating equipment, but other groups continued to exert a firmer price tone.

2.—Annual Price Index Numbers of Residential Building Materials, 1945-54, and Monthly Indexes, 1953 and 1954

(1935–39 = 100)

Year and Month	Composite Index	Principal Components								
		Cement, Sand and Gravel	Brick, Tile and Stone	Lumber and Lumber Products	Lath, Plaster and Insulation	Roofing Material	Paint and Glass	Plumbing and Heating Equipment	Electrical Equipment and Fixtures	Other Materials
1945	148·3	102·1	116·4	191·3	104·8	135·5	142·2	122·2	111·4	118·0
1946	154·5	102·0	121·0	202·1	104·2	146·2	144·2	127·2	116·9	126·4
1947	180·4	109·7	133·4	242·0	107·3	172·3	169·6	145·2	147·4	143·0
1948	217·5	122·3	143·1	305·8	116·7	201·6	183·1	168·3	169·8	162·3
1949	228·0	127·0	151·0	322·1	118·1	190·5	179·6	180·2	173·4	174·7
1950	242·7	131·3	163·8	349·2	116·7	235·4	174·8	183·2	184·5	181·1
1951	286·2	140·9	180·7	425·0	126·3	235·8	197·8	210·4	213·3	212·7
1952	284·8	149·5	195·3	415·7	128·5	217·7	194·9	215·6	212·0	226·3
1953	282·6	151·8	205·8	410·6	128·5	218·6	203·8	209·0	211·4	229·5
1954	277·5	151·3	207·4	400·5	128·8	233·4	208·9	202·8	207·7	226·6
1953										
January	283·6	152·1	199·5	412·2	129·1	217·0	202·7	213·1	211·0	228·8
February	283·9	152·1	199·5	412·8	129·1	217·0	202·2	213·1	211·0	228·8
March	284·7	152·1	205·7	413·9	129·1	217·0	202·2	211·7	217·9	228·8
April	284·3	151·6	205·7	413·3	129·1	216·9	201·8	211·7	217·9	228·8
May	284·3	151·6	207·4	413·5	129·1	216·9	202·7	212·1	209·7	228·8
June	284·1	151·6	207·4	413·2	128·9	219·7	202·7	211·3	209·7	228·8
July	284·0	151·6	207·4	412·8	128·9	219·7	203·9	211·3	209·7	228·8
August	283·7	151·7	207·4	412·6	127·7	219·7	204·4	210·5	210·0	228·8
September	280·9	151·7	207·4	409·0	127·7	219·7	205·2	203·4	210·0	230·4
October	280·2	151·7	207·4	406·7	127·7	219·7	205·7	203·4	214·6	231·0
November	279·2	151·7	207·4	405·0	127·7	219·7	205·7	203·4	208·2	231·0
December	278·2	152·5	207·4	402·6	127·7	219·7	206·5	203·5	207·3	231·0
1954										
January	277·3	153·5	207·4	400·7	127·7	219·8	206·5	203·5	207·3	227·5
February	276·7	153·5	207·4	398·9	127·7	226·2	206·5	203·5	206·2	227·2
March	275·9	152·5	207·4	397·3	129·2	226·2	206·5	203·3	203·7	227·2
April	276·1	151·7	207·4	397·3	129·2	226·1	205·2	203·8	209·2	227·2
May	275·9	151·1	207·4	397·4	129·2	226·1	206·9	202·2	209·2	227·2
June	277·4	151·1	207·4	400·4	129·2	229·3	208·2	202·1	209·9	227·8
July	278·2	151·1	207·4	402·4	129·2	235·8	209·5	200·9	209·9	227·8
August	278·0	151·1	207·4	402·5	129 2	235·8	210·8	200·9	205·6	224·7
September	278·6	151·1	207·4	402·5	129·2	242·2	210·8	203·0	205·6	225·5
October	278·6	151·1	207·4	402·5	129·2	242·2	211·2	203·0	205·6	225·5
November	278·4	151·1	207·4	401·9	129·2	242·2	211·7	203·0	205·6	225·5
December	278·7	149·1	207·4	403·3	126·9	245·5	212·5	203·0	205·6	225·5

Non-residential Building Materials.—An index has been prepared to measure the price change of materials used in non-residential building construction. The index has been constructed on the base 1949 = 100, using weights obtained from data on cost of building materials provided by general and trade contractors for a sample of buildings constructed in Canada during the years 1948-50. The methods of constructing the index are explained in DBS Reference Paper No. 43, *Non-Residential Building Materials Price Index, 1935-1952.* Price indexes for twelve principal component material groups have been calculated by months from January 1949; indexes for nine of these are given in Table **3** for 1953 and 1954.

The composite index of non-residential building materials increased from 112·6 in January 1951 to a peak of 124·9 in March 1953. Most of this increase of 12·3 points or 10·9 p.c. took place during 1951, the composite index increasing 9·7 points from January 1951 to December 1951 as compared with only 2·6 during the longer period December 1951 to March 1953. All component groups contributed to the increase during this period.

During the period March 1953 to December 1954 the composite index decreased 4·5 points or 3·6 p.c. Changes were relatively small for most of the groups during this period with the exception of plumbing and heating and other equipment which declined 5·4 p.c., and lumber products which declined 2·8 p.c.

3.—Annual Price Index Numbers of Non-residential Building Materials, 1950-54, and Monthly Indexes, 1953 and 1954

(1949 = 100)

Year and Month	Composite Index	Principal Components								
		Cement and Concrete Mix	Blocks, Brick and Stone	Lumber and Lumber Products	Lath, Plaster and Insulation	Roofing Materials	Paint and Glass	Plumbing, Heating and Other Equipment	Electrical Equipment and Materials	Steel and Metal Work
1950	105·0	103·2	104·3	110·3	98·7	104·7	100·5	103·0	105·8	107·3
1951	118·6	111·3	113·0	128·3	107·1	128·9	113·0	115·7	125·4	122·0
1952	123·2	117·4	119·7	127·9	109·7	134·5	115·6	121·3	121·7	131·3
1953	124·4	120·2	125·9	127·8	110·0	133·6	125·3	119·2	119·6	134·7
1954	121·8	120·9	127·0	124·5	109·7	132·8	128·2	115·2	117·6	128·2
1953										
January	124·6	120·4	123·0	128·7	110·3	135·1	124·9	121·4	118·6	134·7
February	124·7	120·4	123·4	128·8	110·3	135·1	124·9	121·4	118·6	134·7
March	124·9	120·4	126·0	128·9	110·3	135·1	124·9	121·2	119·6	134·8
April	124·8	119·3	126·0	129·0	110·2	134·9	124·9	121·1	119·9	134·8
May	124·7	119·3	126·5	129·1	110·2	134·9	124·9	120·9	118·5	134·7
June	124·6	119·3	126·5	128·8	110·2	132·6	124·9	121·1	118·7	134·7
July	124·7	120·4	126·5	128·7	110·2	132·6	124·9	120·4	119·6	134·7
August	124·5	120·5	126·5	128·2	109·6	132·6	124·9	119·9	119·7	134·7
September	123·6	120·5	126·5	126·8	109·6	132·6	125·0	115·8	119·7	134·8
October	123·8	120·5	126·5	126·2	109·6	132·6	126·4	115·8	121·1	134·8
November	123·7	120·5	126·5	125·7	109·6	132·6	126·4	115·8	120·8	134·8
December	123·6	120·9	126·5	124·9	109·6	132·8	126·4	115·8	120·7	134·5
1954										
January	123·2	122·1	126·5	124·7	109·8	132·9	126·4	115·8	120·7	133·1
February	123·1	122·1	126·5	124·2	109·3	132·8	126·4	115·6	120·4	132·3
March	122·9	121·8	126·6	123·7	109·9	132·6	128·1	115·6	120·0	132·3
April	122·6	120·5	126·6	123·6	109·9	132·5	128·0	115·0	120·0	132·0
May	121·1	120·4	126·6	123·6	109·8	132·4	128·1	114·9	120·0	125·0
June	121·2	120·6	126·6	124·2	109·8	132·7	128·2	114·7	120·1	125·0
July	121·2	120·6	127·3	125·2	109·8	132·7	128·2	113·9	120·1	125·0
August	120·2	120·6	127·3	125·2	109·8	132·7	128·2	113·9	112·1	125·0
September	120·4	120·6	127·5	124·8	110·0	133·1	128·3	114·7	112·1	125·2
October	120·5	120·6	127·5	124·8	110·4	133·1	128·3	114·7	112·1	125·2
November	120·5	120·8	127·5	124·9	110·4	133·1	128·3	114·7	112·1	125·2
December	120·4	120·1	127·5	125·3	108·2	133·2	128·4	114·7	112·1	125·2

World Wholesale Price Indexes.—Price changes within different countries have varied widely during the years after World War II. Comparisons of Canadian wholesale price indexes and those of other countries are given in Table 4.

4.—Index Numbers of Wholesale Prices in Canada and other Countries, 1949 and December 1952 and 1953

(Base: 1948 = 100, except for France where 1949 = 100. Source: *Monthly Bulletin of Statistics of the United Nations.*)

Country	1949	Month of December—		Country	1949	Month of December—	
		1952	1953			1952	1953
Australia	112	187	186	New Zealand	99	142	140
Canada	**103**	**114**	**113**	Norway	102	155	152
Chile	114	232	313	Peru (Lima)	140	198	212
Denmark	102	139	131	Portugal (Lisbon)	104[r]	118[r]	110
Finland	101	162	157	Sweden	101	143	138
France	100	140	138	Switzerland	95	100	97
India	104	102	106	Union of South Africa	106	151	150
Mexico (Mexico City)	110	151	152	United Kingdom	105	149	149
The Netherlands	104	139	134	United States	95	105	105

Section 2.—The Consumer Price Index

The Consumer Price Index is Canada's official measure of retail price change. It replaces the Cost-of-Living Index and is the fifth in a series of Canadian index numbers of retail prices dating back to 1900. This new measure was introduced by the Dominion Bureau of Statistics in October 1952 in a publication entitled, *The Consumer Price Index, January 1949–August 1952.* Detailed information on the main aspects of the index is contained in that publication.

The purpose of the Consumer Price Index is to measure changes in retail prices of goods and services bought by a representative cross-section of the Canadian urban population. The families covered by the Index lived in 27 Canadian cities of 30,000 population or over, ranged in size from two adults to two adults with four children and had annual incomes ranging from $1,650 to $4,050 during the survey year ended Aug. 31, 1948.

The budget of the Consumer Price Index represents the post-war level of consumption of those families. A list of 224 of the principal goods and services they purchased in the survey year forms the pricing sample of the Index, and the relative amounts they spent on those and similar categories of items determine the relative importance, or weight, given to each item in the Index.

The monthly index number is calculated from a sample of more than 50,000 retail price quotations. Prices are collected by field representatives in 16 cities across Canada and they are obtained by mail questionnaires in 17 other cities. All cities covered, except Charlottetown, had a population of 30,000 or over as at the 1951 Census.

Price changes are measured from month to month and applied to the cost of the Index budget. The budget is often described as a market basket of goods and services. The physical content of this basket is kept constant and only changes in retail prices are allowed to influence its cost over time. A comparison between the current cost and the base-period cost of the same constant basket yields the Index, that is, a measure of the average percentage change in all retail prices from the base period to date. For some of the food items entering into the basket, the quantities are allowed to vary as between months but not as between years, in order to take account of seasonal variations in consumption.

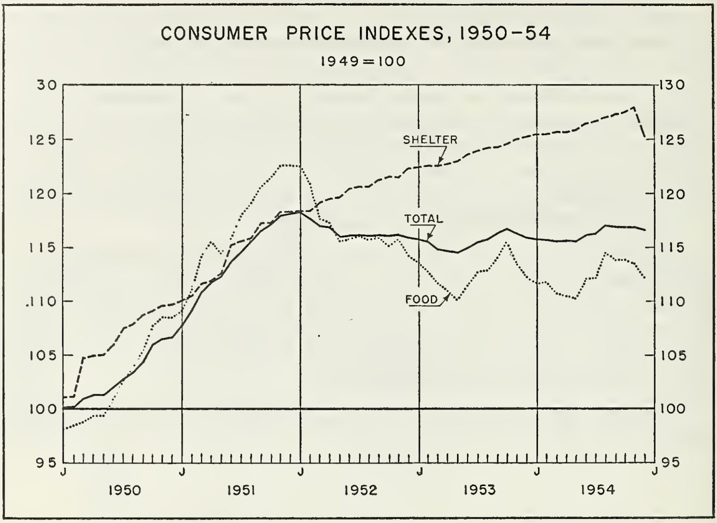
Because the Index refers to a post-war level of living it was fitting that a post-war year be selected as the reference level of prices. Of the post-war years, 1949 was considered the most suitable because price levels were relatively stable. The fact that 1949 is a satisfactory reference level for other index number measurements, such as those related to industrial production, agriculture, imports and exports, was another important consideration.

The percentage distribution of the main group weights as of the base period is as follows:—

Budget Group	*1949 Base Weight*
Food	31·7
Clothing	11·5
Shelter	14·8
Household operation	17·3
Other commodities and services	24·7
TOTAL	100·0

Consumer Price Index Movements.—From a post-war peak of 118·2 in January 1952, the Consumer Price Index declined 2·1 p.c. in 1952, to reach 115·7 on Jan. 2, 1953. Most of the decrease occurred during the early part of the year, but the summer and autumn months were noticeably stable. The first four months of 1953 witnessed a further drop of slightly more than 1 p.c. which brought the index to 114·4 on May 1. A series of five consecutive monthly increases moved the index up to 116·7 by Oct. 1, but was followed by three decreases which placed the index for January 1954 at 115·7, the same level as a year earlier. The first significant change during 1954 occurred between May and June, when the index rose 0·5 p.c. from 115·5 to 116·1.

In contrast with the two-year period from June 1950 to June 1952 which revealed a general upward movement in prices followed by a sharp fall, the period June 1952 to June 1954 was characterized by the absence of any trend and by diverging movements between the components of the index. Between June 1952 and June 1954, food prices fluctuated seasonally over a wide range and were down 3·2 p.c. over the entire period. Non-food commodities were practically unchanged, but services, including shelter, moved up gradually for a gain of more than 5 p.c. As a result, the index for June 1954 stood only 0·1 point above the level of June 1952.



5.—Annual Consumer Price Index, 1945-54, and Monthly Indexes, 1953 and 1954

(1949=100)

Year and Month	Food	Shelter	Clothing	Household Operation	Other Commodities and Services	Total Consumer Price Index
1945	66·3	91·4	66·9	74·9	86·4	75·0
1946	70·0	91·8	69·2	77·2	88·7	77·5
1947	79·5	95·1	78·9	86·2	91·6	84·8
1948	97·5	98·3	95·6	96·8	96·5	97·0
1949	100·0	100·0	100·0	100·0	100·0	100·0
1950	102·6	106·2	99·7	102·4	103·1	102·9
1951	117·0	114·4	109·8	113·1	111·5	113·7
1952	116·8	120·2	111·8	116·2	116·0	116·5
1953	112·6	123·6	110·1	117·0	115·8	115·5
1954	112·2	126·5	109·4	117·4	117·4	116·2
1953						
January	113·5	122·3	109·7	116·5	116·7	115·7
February	112·7	122·5	109·6	116·6	116·7	115·5
March	111·6	122·5	109·7	116·7	115·2	114·8
April	110·9	122·7	109·7	116·9	115·0	114·6
May	110·1	122·9	110·1	116·6	115·1	114·4
June	111·4	123·6	110·1	116·6	115·1	114·9
July	112·7	123·9	110·3	117·0	115·2	115·4
August	112·8	124·1	110·4	117·2	115·8	115·7
September	114·0	124·2	110·4	117·4	115·9	116·2
October	115·5	124·5	110·3	117·5	116·0	116·7
November	113·4	125·0	110·3	117·4	116·3	116·2
December	112·1	125·2	110·2	117·4	116·3	115·8

5.—Annual Consumer Price Index, 1945-54, and Monthly Indexes, 1953 and 1954—concluded

Year and Month	Food	Shelter	Clothing	Household Operation	Other Commodities and Services	Total Consumer Price Index
1954						
January	111·6	125·4	110·1	117·5	116·4	115·7
February	111·7	125·4	110·0	117·5	116·5	115·7
March	110·7	125·6	109·8	117·6	116·6	115·5
April	110·4	125·6	109·9	118·1	117·2	115·6
May	110·2	125·8	109·9	117·3	117·5	115·5
June	112·0	126·4	109·7	117·1	117·5	116·1
July	112·1	126·6	109·6	117·2	117·6	116·2
August	114·4	127·0	109·6	117·2	117·7	117·0
September	113·8	127·2	109·5	117·2	117·6	116·8
October	113·8	127·4	108·4	117·3	117·9	116·8
November	113·4	127·9	108·2	117·2	118·2	116·8
December	112·6	128·2	108·1	117·1	118·2	116·6

Table 6 provides single commodity price relatives on the base 1949 = 100 for a number of important foods entering into the food component of the Consumer Price Index. It also provides a record of average prices based on the actual average level of prices prevailing in October 1952 and calculated for the other months on the basis of the price relatives.

6.—Urban Average and Relative Retail Prices of Staple Foods, Annually 1945-54, and Monthly, 1953 and 1954

(1949 = 100)

Year and Month	Beef, sirloin, per lb.		Pork, fresh loins, per lb.		Lard, pure, per lb.		Eggs, "A", fresh, per doz.		Milk, fresh, per qt.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1945	42·9	60·9	38·9	60·9	17·0	72·5	47·2	76·7	10·3	57·8
1946	44·2	62·7	42·3	66·2	18·5	78·9	48·7	79·2	12·2	68·6
1947	48·3	68·6	46·5	72·9	25·5	108·6	50·3	81·8	15·2	85·4
1948	62·5	88·7	58·5	91·7	28·9	123·3	59·7	97·1	17·3	96·9
1949	70·4	100·0	63·8	100·0	23·5	100·0	61·5	100·0	17·8	100·0
1950	82·8	117·6	63·4	99·3	22·4	95·3	56·5	91·8	18·3	102·9
1951	101·1	143·5	73·3	114·8	28·4	121·1	71·6	116·5	19·6	110·0
1952	93·4	132·7	63·2	99·0	17·0	72·5	59·1	96·0	21·1	118·4
1953	79·6	113·0	72·5	113·7	20·8	88·4	67·6	109·9	21·1	118·5
1954	77·0	109·4	74·6	116·8	26·3	112·2	57·1	92·9	21·1	118·5
1953										
January	84·0	119·3	65·0	101·9	16·4	69·9	55·7	90·6	21·1	118·5
February	84·9	120·6	70·0	109·7	16·5	70·3	54·7	88·9	21·1	118·5
March	81·3	115·5	66·2	103·7	16·9	72·0	60·0	97·5	21·1	118·5
April	78·8	111·9	65·1	102·0	17·6	75·0	63·7	103·6	21·1	118·5
May	78·7	111·8	72·6	113·8	18·1	77·1	65·0	105·7	21·1	118·5
June	79·3	112·6	77·7	121·8	18·7	79·7	66·2	107·6	21·1	118·5
July	80·2	113·9	74·3	116·4	19·1	81·4	75·4	122·6	21·1	118·5
August	80·2	113·9	76·8	120·3	20·1	85·6	79·1	128·6	21·1	118·5
September	80·1	113·8	76·5	119·9	24·2	103·1	80·4	130·7	21·1	118·5
October	79·0	112·2	77·6	121·6	27·1	115·5	82·6	134·3	21·1	118·5
November	74·5	105·8	74·5	116·7	27·3	116·3	67·8	110·2	21·1	118·5
December	73·8	104·8	74·1	116·1	27·0	115·0	60·4	98·2	21·1	118·5

6.—Urban Average and Relative Retail Prices of Staple Foods, Annually 1945-54, and Monthly, 1953 and 1954—concluded

(1949=100)

Year and Month	Beef, sirloin, per lb.		Pork, fresh loins, per lb.		Lard, pure, per lb.		Eggs, "A", fresh, per doz.		Milk, fresh, per qt.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1954										
January	74·8	106·2	75·4	118·1	27·0	115·0	54·5	88·6	21·1	118·5
February	74·5	105·8	78·0	122·2	27·3	116·3	56·5	91·9	21·1	118·5
March	71·7	101·8	77·7	121·8	27·3	116·3	56·3	91·5	21·1	118·5
April	71·7	101·8	76·3	119·6	27·5	117·2	51·9	84·4	21·1	118·5
May	73·1	103·8	77·3	121·1	27·6	117·6	51·5	83·7	21·1	118·5
June	77·1	109·5	81·9	128·3	27·5	117·2	52·0	84·5	21·1	118·5
July	78·2	111·1	77·9	122·1	26·4	112·5	59·0	95·9	21·1	118·5
August	81·1	115·2	76·1	119·2	25·4	108·2	61·2	99·5	21·1	118·5
September	82·1	116·6	72·5	113·6	24·7	105·2	63·0	102·4	21·1	118·5
October	81·0	115·0	68·2	106·9	25·0	106·5	64·9	105·5	21·1	118·5
November	79·9	113·5	66·5	104·2	25·1	106·9	62·4	101·4	21·1	118·5
December	78·9	112·1	67·0	105·0	25·3	107·8	52·4	85·2	21·1	118·5

Year and Month	Flour, per lb.		Tomatoes, canned, 2½'s, tin		Potatoes, 10 lb.		Sugar, granulated, per lb.		Bread, per lb.	
	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative	Average Price	Price Relative
	cts.		cts.		cts.		cts.		cts.	
1945	4·0	57·0	13·5	67·1	34·9	100·3	8·1	87·5	6·6	66·7
1946	4·0	56·8	14·2	70·7	34·3	98·4	8·1	87·5	6·6	66·7
1947	4·5	64·7	18·5	92·1	33·8	97·1	8·8	95·2	7·1	72·4
1948	6·1	88·0	24·4	121·7	40·4	116·1	9·1	98·6	9·1	92·2
1949	7·0	100·0	20·1	100·0	34·8	100·0	9·2	100·0	9·9	100·0
1950	7·3	104·8	17·7	88·0	33·2	95·4	10·6	114·4	10·3	104·6
1951	7·5	106·9	23·1	115·0	34·8	99·9	12·0	129·8	11·4	115·5
1952	7·4	105·9	28·8	143·6	68·6	196·9	11·2	121·0	11·8	119·3
1953	7·6	108·9	24·4	121·8	39·0	111·8	10·0	107·8	12·0	121·5
1954	7·7	110·2	21·5	107·4	37·5	107·6	9·4	101·8	12·5	126·8
1953										
January	7·3	104·7	26·1	130·1	53·1	152·4	10·4	112·7	11·6	117·7
February	7·3	104·7	25·9	129·1	51·2	147·0	10·2	110·6	11·6	117·7
March	7·3	104·7	25·7	128·1	44·2	126·9	10·2	110·6	11·6	117·7
April	7·3	104·7	25·3	126·1	40·0	114·8	10·1	109·5	11·6	117·7
May	7·4	106·2	24·9	124·1	36·9	105·9	10·0	108·4	11·7	118·7
June	7·5	107·6	24·7	123·1	37·1	106·5	9·9	107·3	11·8	119·7
July	7·8	111·9	24·6	122·6	42·9	123·2	9·9	107·3	12·1	122·8
August	7·8	111·9	24·3	121·1	38·8	111·4	9·8	106·2	12·2	123·8
September	7·8	111·9	24·0	119·6	32·6	93·6	9·8	106·2	12·3	124·8
October	7·8	111·9	23·4	116·6	31·1	89·3	9·8	106·2	12·3	124·8
November	7·9	113·3	22·4	111·7	30·2	86·7	9·7	105·1	12·4	125·8
December	7·9	113·3	22·0	109·7	29·3	84·1	9·6	104·1	12·5	126·8
1954										
January	7·9	113·3	21·6	107·7	29·4	84·4	9·6	104·1	12·5	126·8
February	7·8	111·9	21·3	106·2	29·2	83·8	9·6	104·1	12·5	126·8
March	7·8	111·9	21·1	105·2	28·9	83·0	9·5	103·0	12·5	126·8
April	7·7	110·5	20·7	103·2	27·7	79·5	9·5	103·0	12·5	126·8
May	7·7	110·5	20·5	102·2	28·6	82·1	9·4	101·9	12·5	126·8
June	7·7	110·5	20·4	101·7	32·3	92·7	9·4	101·9	12·5	126·8
July	7·7	110·5	20·5	102·2	43·6	125·2	9·3	100·8	12·5	126·8
August	7·7	110·5	20·5	102·2	57·4	164·8	9·3	100·8	12·5	126·8
September	7·6	109·0	20·8	103·7	46·5	133·5	9·3	100·8	12·5	126·8
October	7·6	109·0	21·5	107·2	40·6	116·5	9·2	99·7	12·5	126·8
November	7·5	107·6	23·9	119·1	42·1	120·9	9·3	100·8	12·5	126·8
December	7·5	107·6	25·7	128·1	43·5	124·9	9·3	100·8	12·5	126·8

Consumer Price Indexes for Regional Cities.—Revised regional consumer price indexes were released by the Dominion Bureau of Statistics in November 1953 for nine cities or city combinations. The new series, which replace the cost-of-living indexes for eight regional cities, appear in Table 7. The index for St. John's, N'f'ld., which was prepared subsequent to the date Newfoundland joined Confederation, is calculated on the base June 1951 = 100 and is shown in Table 7 on that base.

The construction of each regional consumer price index involved three main phases: (1) the conversion of an existing cost-of-living index inclusive of all tobacco taxes, from the base August 1939 = 100 to the base 1949 = 100, up to and including Sept. 1, 1953; (2) the calculation of an entirely new index incorporating a revised weighting system and price sample, on the base Sept. 1, 1953 = 100; and (3) the linking of the new series to the converted series as at Sept. 1, 1953, to form a continuous index on the base 1949 = 100.

The regional indexes are not designed to show whether it costs more or less to live in one city than in another, and should not be used for that purpose. Their function is to measure percentage changes in retail prices—over a certain time in each city or city combination—of a fixed basket of goods and services representing the level of consumption of a particular group of families.

7.—Consumer Price Indexes for Regional Cities, Annually 1945-54, and Monthly, 1953 and 1954

(1949 = 100)

Year and Month	St. John's, N'f'ld.[1]	Halifax, N.S.	Saint John, N.B.	Montreal, Que.	Ottawa, Ont.	Toronto, Ont.	Winnipeg, Man.	Saskatoon-Regina, Sask.	Edmonton-Calgary, Alta.	Vancouver, B.C.
1945	...	77·6	75·8	74·4	73·8	75·3	75·2	74·0	75·3	73·6
1946	...	79·6	77·9	76·9	76·5	77·9	77·5	76·6	77·8	75·9
1947	...	86·3	84·6	84·3	84·5	85·5	84·3	84·4	84·6	83·3
1948	...	96·8	97·0	96·6	96·5	97·0	95·8	96·9	96·1	96·0
1949	..	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0
1950	..	102·1	103·3	103·7	103·1	104·1	103·8	102·2	103·9	103·6
1951	..	112·1	114·1	116·1	115·3	115·4	114·6	111·7	113·5	114·3
1952	103·5	115·3	117·4	117·6	116·8	117·5	116·1	112·8	114·8	117·4
1953	102·2	113·2	115·3	116·3	115·0	116·8	114·4	113·1	114·0	116·1
1954	102·8	114·1	116·6	116·8	116·2	118·3	115·3	114·2	114·9	117·4
1953										
January	102·4	112·8	114·7	115·7	114·4	115·9	113·7	111·9	112·6	116·2
February	102·3	113·1	114·8	116·2	114·8	116·0	114·1	112·1	112·6	115·7
March	101·3	112·9	114·5	115·8	114·3	115·9	113·7	112·2	113·0	115·5
April	101·5	112·7	114·6	114·8	114·3	115·7	113·9	112·3	113·1	115·6
May	101·1	112·2	114·4	114·9	113·7	115·7	113·6	112·1	113·2	115·7
June	101·2	112·7	114·9	116·0	114·7	116·5	114·1	112·9	114·0	115·8
July	101·9	113·7	115·8	117·3	115·2	117·2	115·2	113·9	114·7	116·5
August	102·9	114·2	116·7	117·0	115·4	117·5	115·0	114·2	115·3	116·0
September	102·8	113·8	116·1	116·5	115·5	117·6	114·7	113·8	115·1	116·2
October	102·8	114·0	116·1	117·4	116·4	118·4	115·0	114·3	115·3	116·7
November	103·1	113·6	115·9	117·0	116·0	117·8	115·2	113·7	114·9	116·5
December	102·7	113·2	115·5	116·7	115·5	117·6	114·7	113·3	114·5	116·3
1954										
January	102·6	113·2	115·4	116·7	115·3	117·7	114·9	113·2	114·4	116·2
February	102·4	113·8	115·8	116·8	115·5	117·6	115·0	113·5	114·3	116·4
March	102·2	113·7	116·2	116·3	115·3	117·4	114·7	113·7	114·4	116·3
April	102·0	113·8	115·9	116·3	115·5	117·7	114·9	113·6	114·3	116·9
May	102·2	113·6	115·8	116·3	115·5	117·7	114·8	113·5	114·4	116·9
June	102·5	113·9	116·2	117·0	116·1	118·2	115·3	114·1	114·8	117·1
July	102·6	113·8	116·2	117·2	116·4	118·8	115·5	114·1	114·8	117·0
August	104·4	115·3	117·6	117·2	117·0	119·0	116·4	115·3	115·4	118·1
September	103·4	114·8	117·7	116·6	116·9	118·8	115·7	115·1	115·7	118·1
October	103·0	114·6	117·6	117·0	117·3	118·9	115·5	115·2	115·6	118·6
November	102·8	114·5	117·5	117·1	117·2	118·9	115·7	114·8	115·3	118·6
December	102·9	114·5	117·5	117·0	117·0	118·8	115·5	113·9	115·0	118·3

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[1] Explanation of methods used in compiling St. John's, N'f'ld., index (June 1951 = 100) is given in DBS Reference Paper No. 28.

World Retail Price Indexes.—In order to place changes in Canadian retail prices in perspective with those occurring in other countries, Table **8** provides retail price indexes for selected countries and dates. It will be noted that increases in retail prices since 1949 have been world-wide. With the exception of Chile and Peru, where large increases in retail prices occurred, prices were relatively stable in all countries at the end of 1953. These indexes measure price change only within each country and should not be used to compare actual levels of living costs from country to country.

8.—Index Numbers of Retail Prices in Canada and other Countries, 1949 and December 1952 and 1953

(Base: 1948=100, except for France and The Netherlands where 1949=100. Source: *Monthly Bulletin of Statistics of the United Nations.*)

Country	1949	Month of December—		Country	1949	Month of December—	
		1952	1953			1952	1953
Australia	109	181[r]	187	The Netherlands	100	122	122
Canada	**104**[r]	**120**	**120**	New Zealand	102	130	138
Chile (Santiago)	119	205	321	Norway	100	135	137
Denmark	101	124	123	Peru (Lima)	115	156	170
Finland	108[r]	155	155	Sweden	102	130	130
France (Paris)	100	145	142	Switzerland	99	105	104
Iceland (Reykjavik)	102	177	173	Union of South Africa	104	129	130
India	101	104	105	United Kingdom	103	128	130
Mexico (Mexico City)	105	147	140	United States	99	111	112

Section 3.—Index Numbers of Security Prices

Security prices have long been utilized in statistical measurements related to economic phenomena and are, generally, sensitive to changing business conditions although this valuable characteristic is sometimes overshadowed by the fact that their movements may be influenced greatly by speculative interest very remotely associated with underlying economic conditions. Thus, in 1928 and 1929 common-stock prices advanced far beyond levels indicated by business profits and prospects. Security-price trends also have been at variance with other business indexes for short intervals at other periods.

Common Stocks.—Common-stock prices were firmer in the final quarter of 1952 but the trend was reversed in the opening months of 1953. Changes in security price levels in 1953 reflected, in part, prospects for peace in Korea together with a less tense international situation. From a 1952 low point of 163·6 for October, the investors composite index advanced to 172·3 by January 1953. Following relative steadiness in February and March, the index dropped sharply in April to touch 160·8. Continued firmness was maintained at this level until October when a further sharp drop to 151·9 occurred—the lowest index level since December 1950. A nearly continuous increase from October 1953 to December 1954 brought the index up to 206·8, above the October 1953 index by 36·1 p.c. In November 1954 the index passed the previous all-time high of 197·8 established in September 1929.

9.—Investors Index Numbers of Common Stocks, by Month, 1953 and 1954

(1935-39=100)

Year and Month	Types of Stocks									
	Industrials									
	Machinery and Equipment	Pulp and Paper	Milling	Oils	Textiles and Clothing	Food and Allied Products	Beverages	Building Materials	Industrial Mines	Industrials, Total
1953										
January..........	432·9	502·5	132·6	147·3	279·0	115·2	382·5	293·6	137·0	174·3
February........	419·9	494·4	133·4	143·0	269·4	117·0	387·0	291·0	131·0	170·0
March...........	415·5	501·9	130·6	145·3	261·5	117·8	396·8	293·3	129·5	170·8
April............	382·7	472·6	130·4	136·8	247·7	118·2	384·4	282·2	118·3	160·6
May.............	381·6	471·0	128·3	134·6	235·1	118·2	395·9	275·1	116·4	159·1
June.............	378·9	471·9	128·8	127·4	217·6	118·3	388·1	270·7	116·5	155·5
July..............	394·9	494·9	129·8	129·3	202·7	124·3	408·6	278·5	121·2	160·5
August...........	396·9	518·9	136·4	131·3	211·5	125·7	411·4	283·8	117·7	161·6
September.......	375·2	509·2	132·8	120·8	199·4	123·2	397·8	269·4	109·2	152·2
October.........	374·3	503·3	131·3	118·5	189·9	123·3	400·8	267·0	109·1	150·9
November.......	392·7	533·9	131·0	117·8	175·2	124·6	417·9	273·6	108·4	153·2
December.......	391·5	544·4	129·1	119·4	180·7	122·4	420·4	276·1	103·4	152·7
1954										
January..........	395·3	562·6	129·3	126·1	168·8	122·9	434·5	283·6	102·7	156·5
February........	418·4	589·4	129·9	136·3	158·4	123·6	447·9	286·8	103·4	163·2
March...........	432·8	596·4	131·1	136·4	166·3	123·8	440·0	285·2	106·9	165·1
April............	458·8	628·5	133·9	145·4	163·1	124·6	453·6	298·6	116·0	174·7
May.............	474·2	679·8	137·6	147·6	153·2	133·0	476·4	322·8	118·9	181·0
June.............	469·1	685·1	134·0	142·8	151·4	136·8	474·5	321·7	123·8	180·4
July..............	503·6	718·4	138·3	138·2	151·6	135·5	480·1	331·4	122·3	181·8
August...........	520·8	744·3	145·4	142·1	161·2	142·6	497·6	348·5	125·0	187·9
September.......	510·7	750·1	151·9	145·0	154·1	144·5	509·4	347·6	133·3	191·4
October.........	499·0	740·0	156·8	150·8	167·0	144·9	500·0	342·7	132·0	191·9
November.......	523·2	789·3	158·4	158·4	170·2	150·9	519·8	358·7	144·5	203·0
December........	554·9	830·4	156·5	163·5	175·2	150·8	521·5	385·6	149·3	210·5

9.—Investors Index Numbers of Common Stocks, by Month, 1953 and 1954—concluded

Year and Month	Types of Stocks					Investors Composite Index
	Public Utilities					
	Trans-portation	Telephone and Telegraph	Power and Traction	Public Utilities, Total	Banks, Total	
1953						
January	353·6	97·8	146·3	167·9	162·0	172·3
February	341·7	98·1	146·2	166·0	164·8	169·0
March	344·2	100·0	147·0	167·7	165·9	170·0
April	314·0	99·3	144·8	161·0	163·0	160·8
May	307·7	101·1	143·4	160·4	166·3	159·8
June	296·0	101·4	140·9	157·5	168·4	156·8
July	296·4	101·4	141·9	157·9	169·1	160·7
August	281·8	99·3	142·9	154·6	171·7	161·2
September	261·5	95·0	141·5	148·1	171·6	152·9
October	263·2	95·3	142·9	149·0	168·5	151·9
November	255·7	100·4	140·1	149·4	175·4	154·2
December	254·2	101·2	131·4	146·4	180·2	153·6
1954						
January	265·4	102·5	131·5	149·1	185·5	157·4
February	272·8	103·6	134·0	151·9	189·6	163·2
March	267·0	105·9	137·2	153·3	192·5	165·0
April	280·6	107·8	145·0	159·5	195·4	173·6
May	274·6	110·1	152·6	162·4	204·0	179·5
June	301·6	110·5	151·8	167·2	212·2	180·5
July	297·5	112·9	156·4	169·4	216·4	182·3
August	296·6	114·6	156·7	170·2	217·3	187·0
September	295·0	114·0	159·0	170·4	215·0	189·5
October	296·6	115·4	158·8	171·4	217·4	190·2
November	314·6	115·6	156·6	173·8	224·2	199·5
December	337·5	118·6	162·9	181·8	227·0	206·8

Preferred Stocks.—Preferred stock prices remained within exceptionally narrow limits during the final quarter of 1952 and the first two months of 1953. From a level of 161·2 in October, the index moved to 161·6 by February 1953. A firmer tone lifted prices to 163·6 in March but by April this advance had been cancelled and the index again stood at 161·6. From that date to the end of 1953 prices held relatively steady. Slight increases in January and February 1954 were followed by more substantial subsequent changes to bring the index for December to 175·4—8·5 p.c. above the December 1953 index.

10.—Index Numbers of Preferred Stocks, by Month, 1945-54

(1935-39=100)

Note.—Figures for 1927-44 are given in the 1948-49 Year Book, p. 958.

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1945	131·8	132·1	130·9	130·3	132·4	137·2	138·0	137·8	139·4	142·5	145·0	146·6
1946	152·1	154·1	154·5	157·8	159·7	161·6	157·5	157·9	151·4	153·6	154·7	153·5
1947	157·5	158·5	156·0	153·1	154·3	155·8	155·4	153·5	153·6	152·0	150·2	148·1
1948	144·5	141·0	138·9	144·2	147·0	148·2	147·5	146·4	144·8	143·7	144·6	144·6
1949	144·7	144·0	142·8	140·9	139·9	136·3	138·6	140·4	141·8	145·8	150·0	150·7
1950	152·4	153·0	153·7	154·4	157·3	158·2	154·6	155·6	158·2	161·1	161·1	160·2
1951	166·0	169·3	166·0	165·2	164·3	162·2	163·1	165·2	166·4	164·2	162·8	159·5
1952	161·4	160·6	159·5	157·2	157·2	157·7	159·8	163·6	162·4	161·2	160·3	160·7
1953	161·0	161·6	163·6	161·6	162·9	163·0	163·8	164·3	162·0	161·0	161·6	161·7
1954	162·6	163·6	165·4	168·0	169·7	170·7	171·3	173·0	173·4	174·1	175·4	175·4

Mining Stocks.—Prices for mining stocks, after touching a 1952 low point of 99·1 in October, advanced to 106·0 in January 1953 which subsequently proved to be the turning point for a decline that lowered the index to 79·9 by December. Both golds and base metals shared in the recession but the latter group suffered the greater loss. After reaching a peak of 180·6 in January 1953 as compared with 166·9 in October 1952, the base metals index receded to 131·5 by December. Over the same period, gold stocks series moved between 69·5 for October 1952, 73·5 for January, and 57·3 for December. From the December 1953 level the total index increased 26·3 p.c. to 100·9 by December 1954. Golds advanced 18·0 p.c. during this period to 67·6, and base metals moved up 34·8 p.c. to 177·2 p.c.

11.—Weighted Index Numbers of Prices of Mining Stocks, by Month, 1951-54

(1935-39=100)

Year and Month	Gold	Base Metals	Total	Year and Month	Gold	Base Metals	Total
1951				**1953**			
January	68·8	163·5	97·6	January	73·5	180·6	106·0
February	74·3	174·5	104·7	February	72·2	174·3	103·2
March	71·2	166·7	100·3	March	70·1	174·0	101·7
April	66·8	165·3	96·7	April	69·2	159·0	96·5
May	63·7	158·6	92·5	May	68·9	150·9	93·8
June	63·7	152·3	90·6	June	66·8	143·7	90·2
July	65·5	155·0	92·7	July	66·3	148·9	91·4
August	69·7	161·7	97·7	August	67·5	144·0	90·7
September	73·7	173·6	104·0	September	62·5	136·3	85·0
October	75·3	181·2	107·5	October	60·1	134·3	82·7
November	71·9	172·3	102·4	November	60·1	137·6	83·7
December	73·2	172·4	103·4	December	57·3	131·5	79·9
1952				**1954**			
January	72·0	177·7	104·2	January	60·3	131·2	81·9
February	71·2	174·6	102·6	February	62·1	132·0	83·4
March	73·4	169·6	102·7	March	61·5	136·5	84·3
April	77·0	162·1	102·8	April	64·8	145·5	89·3
May	75·1	161·6	101·4	May	64·4	146·5	89·4
June	75·5	162·6	102·0	June	63·9	149·7	90·0
July	76·6	176·6	107·0	July	64·9	154·0	92·0
August	77·6	184·9	110·2	August	67·8	159·2	95·6
September	74·4	180·2	106·6	September	68·3	160·8	96·4
October	69·5	166·9	99·1	October	66·2	161·0	95·0
November	71·1	168·8	100·8	November	65·6	168·7	97·0
December	73·2	172·5	103·4	December	67·6	177·2	100·9

Section 4.—Index Numbers of Bond Yields

The exceptional financial requirements of the war years 1914-18 turned the federal authorities to the domestic market, a field that had hitherto served mainly the needs of the provinces and municipalities. Historical records of long-term bond yields in the domestic market prior to 1914 are obtainable, therefore, from provincial and municipal sources only.

The growing importance of Federal Government financing in the domestic market since World War I made it advisable to publish the Government's index of long-term bond yields shown in Table **12**. This series (1935-39=100) has been prepared from January 1937 on the basis of yield computed for a 15-year, 3-p.c. theoretical issue by the Bank of Canada.

The easier tone for Government of Canada obligations, which developed in the second half of 1951, continued through 1952 and into 1953. There was, however, evidence of a more stable market in 1953 as indicated by the long-term bond yield index which hovered around 119·0. But a sharp reversal occurred in 1954 as the yield index dropped to 98·9 by December. This reflected to a large extent changes in interest rates abroad, particularly in the United States.

12.—Index Numbers of Government of Canada Long-Term Bond Yields, by Month, 1945-54

(1935-39=100)

Month	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
January	96·7	90·0	84·9	92·1	95·4	90·1	97·9	113·4	118·3	115·0
February	96·6	85·9	84·7	92·1	95·2	90·3	97·7	113·9	118·8	112·7
March	96·3	83·8	84·6	96·7	94·7	90·2	104·6	115·1	118·9	104·7
April	96·0	84·3	84·8	96·5	94·4	90·7	104·9	115·3	118·9	100·2
May	96·0	85·1	84·6	95·3	94·4	90·2	104·9	112·6	119·6	99·7
June	95·6	84·9	84·3	95·4	94·4	90·2	105·3	114·0	120·6	99·7
July	94·6	85·1	83·8	95·6	93·8	91·0	104·7	117·3	120·7	97·9
August	94·4	85·0	83·9	96·2	92·7	90·5	104·9	119·1	121·0	97·3
September	94·6	84·9	84·0	96·1	91·8	89·8	105·0	119·6	121·5	97·9
October	94·4	85·0	84·2	96·3	89·1	92·0	105·7	118·6	120·8	98·1
November	93·9	85·0	84·4	95·7	89·2	93·9	107·8	117·8	118·8	98·8
December	92·2	85·0	84·8	95·5	90·3	96·7	112·0	118·0	117·3	98·9

CHAPTER XXIV.—PUBLIC FINANCE*

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—Combined Statistics of Public Finance for All Governments

Combined statistics of public finance for all governments in Canada—federal, provincial and municipal—are presented in this Section. Additional information is provided for each level of government in Sections 2, 3 and 4.

Combined Revenue and Expenditure.—Tables **1** and **3** give details of the federal, provincial and municipal net combined revenue by sources and net combined current and capital expenditure by services, respectively, for 1951. This net basis has been prepared by deducting from revenue, and the appropriate expenditure, certain specified amounts such as grants-in-aid and shared-cost contributions from other governments, institutional revenue, certain other sales of commodities and services, and interest, premium, discount and exchange revenue. Amounts provided for debt retirement are excluded to avoid duplication since all expenditure resulting from capital borrowings is included.

Inter-governmental transfers such as subsidy payments by the Federal Government to the provincial governments are unconditional grants and, therefore, cannot be offset against any specific expenditure. These are set out separately in Tables **1** and **3** in order to prevent duplication and to provide additive totals. Because of the differing accounting practices of governments and variations in fiscal year-ends, discrepancies appear between the amounts recorded as inter-governmental transfers in the two tables.

Tables **2** and **4** show combined revenue of all governments, and combined expenditure of all governments, respectively, for the years 1948-51, both exclusive of inter-governmental transfers.

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* Except as otherwise noted, this Chapter has been revised in the Public Finance and Transportation Division, Dominion Bureau of Statistics.

1.—Combined Revenue of All Governments, 1951

NOTE.—Figures for the fiscal years ended nearest Dec. 31.

Item	Federal	Provincial	Municipal[1]	Total
	$'000	$'000	$'000	$'000
Taxes—				
Corporation	1,143,953	188,457	—	1,332,410
Customs duties and import	347,208	—	—	347,208
Gasoline	—	178,461	—	178,461
General sales	573,471	90,675	27,807	691,953
Income—persons	976,888	65	—	976,953
Liquor[2]	119,939	144,163	—	264,102
Succession duties	38,208	34,190	—	72,398
Real and personal property	—	6,324	468,716[3]	475,040
Tobacco	206,945	9,829	—	216,774
Withholding	55,017	—	—	55,017
Other	203,513	53,258	63,158	319,929
Totals, Taxes	3,665,142	705,422	559,681	4,930,245
Licences, Permits and Fees—				
Motor-vehicle	270	72,700	—	72,970
Other	6,028	20,835	16,343	43,206
Totals, Licences, Permits and Fees	6,298	93,535	16,343	116,176
Public domain	2,685	131,658	—	134,343
Public utility contributions to municipalities	—	—	29,323	29,323
Post Office (net)	6,695	—	—	6,695
Bank of Canada profits	24,018	—	—	24,018
Bullion and coinage	4,838	—	—	4,838
Miscellaneous revenue	29,677[4]	14,793	45,459	89,929
Totals, Revenue (excluding Inter-governmental Transfers)	**3,739,353**	**945,408**	**650,806**	**5,335,567**
Inter-governmental Transfers—				
Federal subsidies to provinces	—	20,022	—	20,022
Subsidies to municipalities	—	—	20,455[5]	20,455
Transitional grant to Newfoundland	—	6,500	—	6,500
Dominion-Provincial Taxation Agreements	—	95,731	—	95,731
Share of income tax on power utilities	—	3,713	—	3,713
Nova Scotia highway tax	—	245	—	245
Manitoba Municipal Commissioner's levy	—	520	—	520
Interest on Common School Fund	—	134	—	134
Totals, Inter-governmental Transfers	—	**126,865**	**20,455**	**147,320**
Grand Totals, 1951	**3,739,353**	**1,072,273**	**671,261**	**5,482,887**

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[1] Revenue of municipalities in the Province of Quebec is estimated. [2] Includes provincial profits from liquor control. [3] Excludes personal property which is inseparable from other taxes. [4] Includes $1,786,000 of excess of refunds over expenditure *re* expansion of industry. [5] Includes federal grants to municipalities in lieu of taxes on federal properties which are not segregated from provincial subsidies to municipalities.

2.—Combined Revenue of All Governments, exclusive of Inter-governmental Transfers, 1948-51

NOTE.—Figures for the fiscal years ended nearest Dec. 31. Revenue of municipalities in the Province of Quebec is estimated.

Item	1948	1949	1950[1]	1951[1]
	$'000	$'000	$'000	$'000
Taxes—				
Corporation	646,296	732,380	989,588	1,332,410
Customs duties and import	223,786	226,403	296,433	347,208
Gasoline	124,305	137,759	155,441	178,461
General sales	440,502	481,343	561,356	691,953
Income—persons	762,749	622,104	652,444	976,953
Liquor[2]	229,712	241,513	268,118	264,102
Succession duties	54,672	59,084	64,815	72,398
Real and personal property[3]	341,265	373,759	405,617	475,040
Tobacco	199,398	215,912	216,998	216,774
Withholding	43,445	47,475	61,610	55,017
Other	237,450	168,356	230,986	319,929
Totals, Taxes	3,303,580	3,306,088	3,903,406	4,930,245
Licences, Permits and Fees—				
Motor-vehicle	51,471	58,198	66,948	72,970
Other	30,793	33,472	37,681	43,206
Totals, Licences, Permits and Fees	82,264	91,670	104,629	116,176
Public domain	74,228	94,218	116,406	134,343
Public utility contributions to municipalities	20,415	23,718	24,469	29,323
Post Office (net)	3,011	1,933	[4]	6,695
Bank of Canada profits	19,107	20,442	19,663	24,018
Bullion and coinage	3,253	4,524	4,708	4,838
Miscellaneous revenue	168,330	111,302	120,020	89,929
Totals, Revenue (excluding Inter-governmental Transfers)	**3,674,188**	**3,653,895**	**4,293,301**	**5,335,567**

[1] Includes provincial and municipal revenue of Newfoundland. [2] Includes provincial profits from liquor control. [3] Excludes personal property for municipal governments which is inseparable from other taxes. [4] Expenditure exceeds revenue. *See* Table 3 where net excess is included under "Other Expenditure".

3.—Combined Expenditure of All Governments, 1951

NOTE.—Figures for the fiscal years ended nearest Dec. 31.

Item	Federal	Provincial	Municipal[1]	Total
	$'000	$'000	$'000	$'000
Public Welfare—				
Health and hospital care	28,813	166,225	45,727	240,765
Labour and unemployment insurance	56,594	4,749	—	61,343
Relief	—	12,864	6,787	19,651
Old age pensions	132,742	35,364	—	168,106
Family allowances	322,317	—	—	322,317
Other	20,277	48,950	68,636	137,863
Totals, Public Welfare	560,743	268,152	121,150	950,045
Education	21,102	191,768	270,799	483,669
Transportation	148,839	302,829	121,222	572,890
Agriculture	70,734	25,509	—	96,243
Public domain	51,087	60,999	—	112,086
National defence	1,400,709	—	—	1,400,709
Veterans' pensions and aftercare	198,230	—	—	198,230
Expansion of industry	[2]	—	—	—
Price control and rationing	205	—	—	205
Debt charges, net (excluding retirements)	432,516	50,641	35,688	518,845
Other expenditure	399,761	139,472	223,958	763,191
Totals, Expenditure (excluding Inter-governmental Transfers)	**3,283,926**	**1,039,370**	**772,817**	**5,096,113**

For footnotes, *see* end of table.

3.—Combined Expenditure of All Governments, 1951—concluded

Item	Federal	Provincial	Municipal[1]	Total
	$'000	$'000	$'000	$'000
Inter-governmental Transfers—				
Federal subsidies to provinces	20,108	—	—	20,108
Transitional grant to Newfoundland	6,500	—	—	6,500
Provincial subsidies to municipalities	—	19,723	—	19,723
Dominion-Provincial Taxation Agreements	96,868	—	—	96,868
Share of income tax on electric power utilities	3,732	—	—	3,732
Nova Scotia highway tax	—	—	246	246
Manitoba Municipal Commissioner's levy	—	—	486	486
Interest on Common School Fund	134	—	—	134
Grants to Municipalities in lieu of taxes on federal properties	2,062	—	—	2,062
Totals, Inter-governmental Transfers	**129,404**	**19,723**	**732**	**149,859**
Grand Totals	**3,413,330**	**1,059,093**	**773,549**	**5,245,972**

[1] Expenditure of municipalities in the Province of Quebec is estimated. [2] Refunds of expenditure exceeded expenditures. Excess included in Table 1 under "Miscellaneous Revenue".

4.—Combined Expenditure of All Governments, exclusive of Inter-governmental Transfers, 1948-51

NOTE.—Figures for the fiscal years ended nearest Dec. 31. Expenditure of municipalities in the Province of Quebec is estimated.

Item	1948	1949[1]	1950[1]	1951[1]
	$'000	$'000	$'000	$'000
Public Welfare—				
Health and hospital care	137,738	194,579	215,599	240,765
Labour and unemployment insurance	45,466	52,182	60,361	61,343
Relief	10,992	18,754	17,708	19,651
Old age pensions	93,938	127,906	139,912	168,106
Family allowances	272,608	299,347	311,277	322,317
Other	98,705	117,812	129,847	137,863
Totals, Public Welfare	659,447	810,580	874,704	950,045
Education	364,405	406,590	446,190	483,669
Transportation	467,703	514,022	489,296	572,890
Agriculture	89,971	107,700	202,603	96,243
Public domain	91,304	103,602	68,436	112,086
National defence	256,092	372,596	759,779	1,400,709
Veterans' pensions and aftercare	235,578	202,466	191,777	198,230
Price control and rationing	30,721	2,748	—	205
Debt charges, net (excluding retirements)	475,136	490,159	446,360	518,845
Other expenditure	450,257	493,159	621,472	763,191
Totals, Expenditure (excluding Inter-governmental Transfers)	**3,120,614**	**3,503,622**	**4,100,617**	**5,096,113**

[1] Includes provincial and municipal expenditure of Newfoundland.

Combined Debt.—Tables **5** and **6** give details of combined debt of all governments. Table **5** shows the aggregate debt of the federal, provincial and municipal governments and the inter-governmental debt which is deducted to arrive at a combined government figure. Table **6** shows the combined debt, exclusive of inter-governmental debt for the years 1948-51 inclusive.

5.—Composition of Total Debt of All Governments, 1951

NOTE.—Figures for fiscal years ended nearest Dec. 31.

Item	Federal	Provincial	Municipal	Total	Deduct Inter-govern-mental Debt	Combined Govern-mental Debt
	$'000	$'000	$'000	$'000	$'000	$'000
Direct Debt—						
Funded debt	13,280,242	2,211,084	1,392,265	16,883,591	18,205	16,865,386
Less Sinking Funds	25,903	364,929	104,094	494,926	—	494,926
Net funded debt	13,254,339	1,846,155	1,288,171	16,388,665	18,205	16,370,460
Treasury bills	1,400,000[1]	153,122	2,935	1,556,057	87,206	1,468,851
Savings deposits	38,031	1,548	—	39,579	—	39,579
Temporary loans	—	996	89,692	90,688	—	90,688
Other direct liabilities	3,302,342[2]	195,614	202,673	3,700,629	119,657	3,580,972
Totals, Direct Debt (less Sinking Funds)	**17,994,712**	**2,197,435**	**1,583,471**	**21,775,618**	**225,068**	**21,550,550**
Indirect Debt—						
Guaranteed bonds	620,622[3]	900,558	23,888	1,545,068	12,992	1,532,076
Less Sinking Funds	7,482	4,885	750	13,117	54	13,063
Net guaranteed bonds	613,140	895,673	23,138	1,531,951	12,938	1,519,013
Loans under the Municipal Improvement Assistance Act, 1938	—	3,945	—	3,945	3,945	—
Guaranteed bank loans and other indirect liabilities	69,204[4]	47,991	—	117,195	8,218	108,977
Totals, Indirect Debt (less Sinking Funds)	**682,344**	**947,609**	**23,138**	**1,653,091**	**25,101**	**1,627,990**
Grand Totals	**18,677,056**	**3,145,044**	**1,606,609**	**23,428,709**	**250,169**	**23,178,540**

[1] Includes $200,000,000 deposit certificates and $750,000,000 six-month treasury bills. [2] Excludes provincial debt account of $11,920,000 and includes Unemployment Insurance Fund investment securities of $774,867,000. [3] Includes guaranteed and unguaranteed bonds of the Canadian National Railways as at Mar. 31, to correspond with fiscal year-end of the Federal Government. [4] Excludes contingent liability in respect of Federal Government guarantee of deposits maintained by chartered banks in the Bank of Canada, miscellaneous guarantees the amounts of which were not finally determined or were indeterminate at the close of the fiscal year, and contingent liabilities of the Canadian National Railways.

6.—Combined Debt of All Governments, exclusive of Inter-governmental Debt, 1948-51

NOTE.—Figures for fiscal years ended nearest Dec. 31. The debt of municipalities in the Province of Quebec is estimated.

Item	1948	1949	1950[1] r	1951[1]
	$'000	$'000	$'000	$'000
Direct Debt—				
Funded debt	16,810,054	16,763,373	16,708,748	16,865,386
Less Sinking Funds	399,158	499,992	464,403	494,926
Net funded debt	16,410,896	16,263,381	16,244,345	16,370,460
Treasury bills	1,339,872	1,339,681	1,463,835	1,468,851
Savings deposits	104,761	107,746	39,432	39,579
Temporary loans	71,409	87,896	88,985	90,688
Other direct liabilities	2,196,743	2,372,761	2,786,373	3,580,972
Totals, Direct Debt (less Sinking Funds)	**20,123,681**	**20,171,465**	**20,622,970**	**21,550,550**
Indirect Debt—				
Guaranteed bonds	1,194,630	1,405,206	1,517,400	1,532,076
Less Sinking Funds	31,331	29,738	33,817	13,063
Net guaranteed bonds	1,163,299	1,375,468	1,483,583	1,519,013
Guaranteed bank loans and other indirect liabilities	80,637	116,507	102,800	108,977
Totals, Indirect Debt (less Sinking Funds)	**1,243,936**	**1,491,975**	**1,586,383**	**1,627,990**
Grand Totals	**21,367,617**	**21,663,440**	**22,209,353**	**23,178,540**

[1] Includes provincial and municipal debt of Newfoundland.

Section 2.—Federal Public Finance

A sketch of public finance from the French régime to the outbreak of World War I appears in the 1941 Year Book, pp. 742-743. Detailed sketches *re* tax changes from 1914 to 1938 will be found in issues of the Year Book beginning with the 1926 edition. An outline of the financing of Canada's war effort, including the more important changes in taxation during the war years from 1939 to 1945, is given in the 1945 Year Book, pp. 918-923. Budgets for the years ended Mar. 31, 1946-51 will be found in issues of the Year Book beginning with the 1946 edition. The most important post-war Budget changes, up to and including the 1952-53 Budget, are summarized in the 1952-53 Year Book, pp. 1026-1030. The post-war financial policy of the Government of Canada is outlined in the 1954 Year Book at pp. 1061-1064.

The 1954-55 Budget.—The Budget for 1954-55 was presented by the Minister of Finance on Apr. 6, 1954. A number of changes in the tax rate structure were proposed. The more important of these are outlined briefly as follows:—

An amendment to re-establish past policy with respect to the tax status of fire and casualty mutual insurance companies withdrew the provision in the income tax regulations which limits the deductions for capital costs to the amount taken on the taxpayers' books of account.

No immediate provisions were recommended in the succession duty law, but it was announced that work had commenced on rewriting the present statutory provisions.

No increases in customs tariff were proposed, and the duty was eliminated on machinery and apparatus, including tubing of a type not made in Canada, for use in operation of potash and rock-salt mines. Duty free entry was provided for materials and parts used in the construction and repair of railway signal systems. The duties on motor rail cars or units were suspended until July 1, 1956, and on uranium until July 1, 1958.

Some of the principal items on which the tariff was substantially reduced included automatic controls for certain sterilizing processes, tear gas ammunition for use by law enforcement authorities and impregnated jute fabric used by nurserymen. The exemption, from duty and taxes, of motor-vehicles imported as settlers' effects, was increased from a valuation of $1,500 to $2,500.

Certain items were added to the schedule of exemption with regard to the sales tax: for example, road machinery and fire-fighting equipment (when purchased for use by municipalities), wall panels, sheet music and hearing aids—but no change was proposed in the general sales tax rate. It was expected that a total annual revenue loss under all sales tax changes would be about $3,000,000.

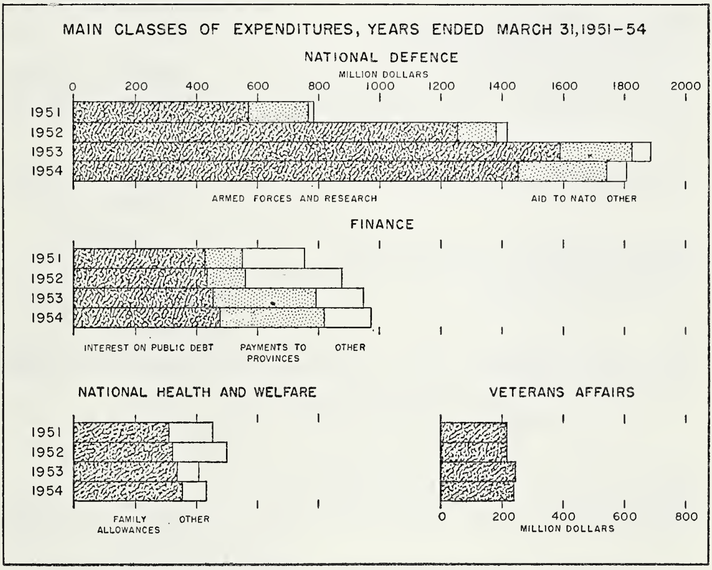
Some changes were recommended with regard to the 15 p.c. special excise tax. This was reduced from 15 p.c. to 10 p.c. on items such as soft drinks, candy, cosmetics, tires and tubes, motorcycles, smokers' accessories, clocks, watches and jewellery, and was removed completely from furs, electrical household appliances, certain types of sporting goods, and luggage.

A technical change was made in the method of taxing beer: the tax on malt being replaced by a gallonage tax. A loss of about $36,000,000 in annual revenue is expected.

Total revenue, after taking into account these tax changes, was expected to amount to $4,464,000,000, plus old age security taxes of approximately $305,000,000. Estimated expenditures amount to $4,460,000,000. Total ordinary revenue for the fiscal year ending Mar. 31, 1954, amounted to $4,321,771,000; special receipts and credits amounted to $74,548,000. Grand total revenue was $4,396,320,000 and expenditures were $4,350,522,000 resulting in an excess of revenue over expenditure or a decrease in the net debt of $45,797,000.

Subsection 1.—Balance Sheets of the Federal Government

Table 7 shows the balance sheets of the Federal Government as at Mar. 31, 1953 and 1954. The figures of this table are on a basis not strictly comparable to those in previous Year Books, chiefly because of changes in the method of accounting for cash.


MAIN CLASSES OF EXPENDITURES, YEARS ENDED MARCH 31,1951-54

7.—Balance Sheet of the Federal Government, as at Mar. 31, 1953 and 1954

Assets	1953	1954
	$	$
Assets—		
Cash and Other Current Assets—		
Cash in current and special deposits	255,836,979	359,909,146
Cash in hands of collectors and in transit	129,693,034	123,643,105
Cash in miscellaneous departmental imprest and advance accounts	11,142,586	[1]
Other Liquid Assets—		
Exchange Fund account—advances represented by cash and securities	1,770,789,386	1,763,768,540
Securities investment account	59,472,985	18,012,950
Working Capital Advances—		
Crown corporations	23,927,192	22,711,692
Defence Production Revolving Fund	102,110,487	80,243,742
Temporary loan to Old Age Security Fund	99,483,324	45,837,905
Departmental	96,019,433	42,456,068
Miscellaneous accountable advances	12,795,715	35,239,640
Other Current Assets—		
Miscellaneous accounts receivable	30,538,798	22,466,483
	2,591,809,919	2,514,289,271

For footnotes, *see* end of table p. 1133.

7.—Balance Sheet of the Federal Government, as at Mar. 31, 1953 and 1954—continued

Assets and Liabilities	1953	1954
	$	$
Assets—concluded		
Loans to, and investments in, Crown agencies—		
Bank of Canada—capital stock	5,920,000	[2]
Central Mortgage and Housing Corporation—capital and loans	432,534,975	531,350,210
Canadian Farm Loan Board—capital stock and loans	28,921,347	32,619,949
Railway and steamship companies	1,045,687,379	1,027,445,275[3]
Miscellaneous	192,124,119	203,666,348
	1,705,187,820	1,795,081,782
Other Loans and Investments—		
To provincial and municipal governments	87,246,392	83,577,461
To United Kingdom and other governments	1,864,894,875	1,772,347,300
Canada's Subscription to Capital of—		
International Monetary Fund	322,502,497	322,502,497
International Bank for Reconstruction and Development	70,864,349	70,864,349
Soldier Settlement and Veterans Land Act loans	162,665,595	162,015,272
Miscellaneous	17,928,054	26,589,641
	2,526,101,762	2,437,896,520
Sinking fund and other investments held for retirement of unmatured funded debt	27,625,178	101,850,768
Province debt accounts	2,296,152	2,296,152
Deferred Charges—		
Unamortized discounts and commissions on loans	60,659,579	70,926,393
Unamortized portio nof Civil Service Superannuation Account liability	189,000,000	189,000,000
	249,659,579	259,926,393
Sundry suspense accounts	199,943,521	192,295,616
Gross Totals, Active Assets	**7,302,623,931**	**7,303,636,502**
Less: Reserve for possible losses on ultimate realization of active assets	545,867,388	496,384,065
Net Totals, Active Assets	**6,756,756,543**	**6,807,252,437**
Net Debt—		
Non-active Assets—		
Capital expenditures	1,125,550,860	1,154,616,455
Other	556,281,473	561,304,088
Consolidated deficit account	9,479,901,936	9,400,016,521
Totals, Net Debt	**11,161,734,269**	**11,115,937,064**
Totals, Gross Debt	**17,918,490,812**	**17,923,189,502**
Liabilities—[4]		
Floating Debt—		
Matured funded debt outstanding	20,017,378	68,247,172
Notes and other obligations payable on demand	282,000,828	268,673,566
Interest due and outstanding	57,105,303	56,339,424
Outstanding cheques and warrants	230,769,091	249,171,554
Miscellaneous accounts payable	257,585,611	202,437,303
Post Office account	16,423,585	23,656,800
	863,901,795	868,525,819
Deposit and Trust Accounts—		
Post Office Savings Bank	39,322,230	37,792,914
Indian Trust Funds	22,541,954	23,032,904
Miscellaneous	121,203,568	143,308,191
	183,067,752	204,134,009

For footnotes, *see* end of table.

7.—Balance Sheet of the Federal Government, as at Mar. 31, 1953 and 1954—concluded

Liabilities	1953	1954
	$	$
Liabilities—[4]—concluded		
Insurance, Pension and Guaranty Accounts—		
Government annuities	736,540,927	798,454,014
Insurance and guaranty funds	77,929,446	[5]
Pension and retirement funds	752,659,174	[5]
Superannuation account	—	656,667,961
Permanent Services pension account	—	217,157,456
Miscellaneous	—	100,611,473
	1,567,129,547	1,772,890,904
Deferred Credits—		
Interest accrued on public debt	113,416,921	125,424,745
Miscellaneous	16,529,332	25,913,884
	129,946,253	151,338,629
Sundry Suspense Accounts—		
Defence equipment replacement	271,133,711	305.722,925
Provincial 5-p.c. corporation income tax collections suspense	47,923,334	—
Miscellaneous	32,940,863	32,488,997
	351,997,908	338,211,922
Province Debt Accounts	11,919,968	11,919,969
Funded Debt Unmatured—		
Payable in Canada—		
Bonds, deposit certificates, treasury bills and notes	14,416,039,540	14,184,058,110
Payable in London	52,904,299	51,070,140
Payable in New York	341,583,750	341,040,000
	14,810,527,589	14,576,168,250
Totals, Liabilities or Gross Debt	**17,918,490,812**	**17,923,189,502**

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[1] Included in miscellaneous accountable advances. [2] Included in miscellaneous. [3] Excludes steamship companies which are included in miscellaneous. [4] Direct liabilities only. Indirect liabilities or guarantees by the Government of Canada are given on p. 1154. [5] Changed classification.

Subsection 2.—Revenue and Expenditure

In the fiscal year ended Mar. 31, 1954, Federal Government revenue amounted to $4,396,000,000 compared with $4,361,000,000 in the previous year, an increase of $35,000,000. During the same period, expenditure increased by $13,000,000 from $4,337,000,000 to $4,351,000,000. The surplus of revenue over expenditure for the fiscal year was $46,000,000.

Tax revenue was $6,000,000 greater than in the previous fiscal year and non-tax revenue increased $38,000,000. Special receipts and other credits decreased by $9,000,000.

8.—Details of Revenue, Years Ended Mar. 31, 1952-54

Revenue	1952	1953	1954
	$	$	$
Ordinary Revenue—			
Tax Revenue—			
Customs import duties	346,364,563	389,442,109	407,312,241
Excise duties	217,939,983	241,360,370	226,732,460
Income tax[1]	2,161,373,408[2]	2,473,790,089[2]	2,432,603,505[2]
Excess profits tax	2,364,909	—	—
Sales tax (net)	573,470,562[2]	566,233,167[2]r	587,331,544[2]
Succession duties	38,207,985	38,070,530	39,137,594
Other taxes	318,053,672	288,696,672r	310,467,109
Totals, Tax Revenue	3,657,775,082	3,997,592,937	4,003,584,453

For footnotes, *see* end of table p. 1134.

8.—Details of Revenue, Years Ended Mar. 31, 1952-54—concluded

Revenue	1952	1953	1954
	$	$	$
Ordinary Revenue—concluded			
Non-tax Revenue—			
Post Office	104,610,122	111,904,487	110,952,751
Return on investments[3]	117,621,906	116,905,516	151,857,858
Bullion and coinage	4,838,495	4,386,195	4,241,246
Other	54,901,137	46,938,466	51,134,970
Totals, Non-tax Revenue	281,971,660	280,134,664	318,186,825
Totals, Ordinary Revenue	**3,939,746,742**	**4,277,727,601**	**4,321,771,278**
Special Receipts and Other Credits	**41,161,910**	**83,095,188**	**74,548,305**
Grand Totals, Revenue	**3,980,908,652**	**4,360,822,789**	**4,396,319,583**

[1] Includes personal corporations and income tax on interest, dividends, rents and royalties going abroad
[2] Excludes tax credited to Old Age Security Fund. [3] Includes interest on investments, and profits o the Bank of Canada.

9.—Details of Expenditure, Years Ended Mar. 31, 1952-54

Expenditure	1952	1953	1954
	$	$	$
Finance	873,613,548	946,967,875	971,375,876
Public Debt Charges—			
Interest on public debt	*519,933,151*[1]	*451,339,521*	*476,061,625*
Annual amortization of bond discounts and commissions	*9,665,295*	*11,981,727*	*17,796,353*
Servicing of public debt	*384,889*	*508,411*	*604,406*
Cost of loan flotation	*1,051,474*	*1,089,578*	*1,265,762*
Totals, Public Debt Charges	*531,034,809*	*464,919,237*	*495,728,146*
Provincial subsidies and tax rental payments	*127,208,136*	*338,699,912*	*340,967,635*
Government contribution to Civil Service Superannuation Account	*110,910,777*	*38,801,864*	*54,450,620*
Reserve for possible losses on realization of active assets.	*75,000,000*	*75,000,000*	*50,000,000*
Other	*29,459,826*	*29,546,862*	*30,229,475*
Agriculture	67,134,389	106,710,890	108,361,384
Freight assistance of western feed grains	*14,999,240*	*20,661,349*	*16,998,752*
Other	*52,135,149*	*86,049,541*	*91,362,632*
Auditor General's Office	601,128	576,211	614,880
Canadian Broadcasting Corporation	[2]	8,235,311	24,996,275
Chief Electoral Officer	367,736	464,487	5,527,130
Citizenship and Immigration	23,240,788	23,646,348	28,478,651
National Film Board	[3]	[3]	*2,997,528*
Civil Service Commission	1,691,663	1,909,508	2,051,348
Defence Production	30,978,479	88,817,141	47,898,563
Capital assistance to defence industry	*22,694,911*	*79,079,453*	*37,824,896*
Other	*8,283,568*	*9,737,688*	*10,073,667*
External Affairs	37,582,459	39,251,463	45,718,964
Fisheries	8,733,025	10,776,926	9,254,771
Governor General and Lieutenant-Governors	275,114	396,924	399,086
Insurance	403,336	448,619	492,239
Justice, including Penitentiaries	14,038,715	14,908,495	15,017,396
Labour	64,302,099	67,021,861	67,561,441
Unemployment Insurance Act, administration and Government contribution	*53,844,691*	*56,168,359*	*57,919,075*
Government annuities (payment required to maintain reserve)	*940,138*	*743,617*	*98,911*
Other	*9,517,270*	*10,109,885*	*9,543,455*
Legislation	5,945,263	6,157,261	5,600,210
Mines and Technical Surveys	27,751,836	29,658,169	38,536,620
National Defence	1,415,473,862	1,882,418,468	1,805,914,922
Defence Appropriation Act	*126,415,799*	*235,053,327*	*289,707,406*
Other	*1,289,058,063*	*1,647,365,141*	*1,516,207,516*

For footnotes, *see* end of table.

9.—Details of Expenditure, Years Ended Mar. 31, 1952-54—concluded

Expenditure	1952	1953	1954
	$	$	$
National Health and Welfare	498,752,115	406,564,698	430,533,808
General health grants	*24,322,497*	*27,333,354*	*29,183,929*
Family allowances	*320,457,673*	*334,197,685*	*350,113,902*
Old age assistance and allowances to blind persons[4]	*83,204,713*	*22,099,463*	*23,202,285*
Deficit Old Age Security Fund	*49,668,855*	—	—
Other	*21,098,377*	*22,934,196*	*28,033,692*
National Revenue	54,063,557	47,313,178	49,937,839
Canadian Broadcasting Corporation	*8,300,972*	[2]	[2]
Other	*45,762,585*	*47,313,178*	*49,937,839*
Northern Affairs and National Resources	[3]	[3]	19,118,141
Post Office	97,973,263	105,553,191	113,581,752
Privy Council including Prime Minister's Office	4,057,687	3,720,571	3,732,910
Public Archives	251,018	306,714	346,910
Public Printing and Stationery	1,103,156	1,607,237	2,036,771
Public Works	77,544,088	81,847,470	114,956,865
Trans-Canada Highway contributions	[3]	[3]	*13,378,998*
Other	*77,544,088*	*81,847,470*	*101,577,867*
Resources and Development	34,432,805	38,477,423	[5]
National Film Board	*2,662,333*	*2,919,779*	[6]
Trans-Canada Highway contributions	*12,566,028*	*13,952,545*	[7]
Other	*19,204,444*	*21,605,099*	—
Royal Canadian Mounted Police	27,340,713	31,141,321	33,845,572
Secretary of State	2,399,468	2,201,462	3,278,154
Trade and Commerce	46,896,842	44,846,035	44,626,253
National Research and Atomic Energy Control Board	*25,079,896*	*28,343,366*	*28,099,831*
Other	*21,816,946*	*16,502,669*	*16,526,422*
Transport	99,900,569	103,905,716	118,012,795
Veterans Affairs	216,026,529	241,424,539	238,714,852
Grand Totals, Expenditures	**3,732,875,250**	**4,337,275,512**	**4,350,522,378**

[1] Includes $87,510,068 adjustment required to place interest on public debt on accrual basis. [2] Canadian Broadcasting Corporation now operated as a separate administrative unit; previously shown under National Revenue. [3] *See* Resources and Development. [4] Pensions under the Old Age Security Act of 1951 (effective January, 1952) are paid out of the Old Age Security Fund account and are not recorded under departmental expenditure. *See* pp. 264-267. [5] Name of Department changed to Northern Affairs and National Resources. [6] *See* Citizenship and Immigration. [7] *See* Public Works.

10.—Per Capita Revenue and Expenditure, by Principal Items, Years Ended Mar. 31, 1952-54

Note.—Figures of revenue and expenditure to which these per capita figures relate are given in Tables **8** and **9**. The basis of calculation was the estimated population as at June 1 of the immediately preceding year for 1953 and 1954; for 1952, Census of 1951 figure was used.

Revenue and Expenditure	1952	1953	1954
	$	$	$
Ordinary Revenue—			
Tax Revenue—			
Customs import duties	24·72	26·99	27·56
Excise duties	15·56	16·73	15·34
Income tax	154·28	171·43	164·58
Excess profits tax	0·17	—	—
Sales tax (net)	40·94	39·24	39·74
Succession duties	2·73	2·64	2·64
Other taxes	22·70	20·01	21·00
Totals, Tax Revenue	261·10	277·04	270·86

10.—Per Capita Revenue and Expenditure, by Principal Items, Years Ended Mar. 31, 1952-54—concluded

Revenue and Expenditure	1952	1953	1954
	$	$	$
Ordinary Revenue—concluded			
Non-tax Revenue—			
Post Office	7·47	7·76	7·51
Return on investments	8·40	8·10	10·27
Bullion and coinage	0·34	0·30	0·29
Other	3·92	3·25	3·46
Totals, Non-tax Revenue	20·13	19·41	21·53
Totals, Ordinary Revenue	**281·23**	**296·45**	**292·39**
Special Receipts and Other Credits	**2·94**	**5·76**	**5·04**
Grand Totals, Revenue	**284·17**	**302·21**	**297·43**
Expenditure—			
Finance—			
Interest on public debt	*37·11*	*31·28*	*32·21*
Annual amortization of bond discounts and commissions	*0·69*	*0·83*	*1·20*
Servicing of public debt	*0·03*	*0·03*	*0·04*
Cost of loan flotations	*0·08*	*0·08*	*0·09*
Totals, Public Debt Charges	*37·91*	*32·22*	*33·54*
Provincial subsidies and tax rental payments	*9·08*	*23·47*	*23·07*
Other	*15·37*	*9·93*	*9·11*
Totals, Department of Finance	62·36	65·62	65·72
Agriculture	4·79	7·40	7·33
Auditor General's Office	0·04	0·04	0·04
Canadian Broadcasting Corporation	—	0·57	1·69
Chief Electoral Officer	0·03	0·03	0·37
Citizenship and Immigration	1·66	1·64	1·72
Civil Service Commission	0·12	0·13	0·14
Defence Production	2·21	6·16	3·24
External Affairs	2·68	2·72	3·09
Fisheries	0·62	0·75	0·63
Governor General and Lieutenant-Governors	0·02	0·03	0·03
Insurance	0·03	0·03	0·03
Justice, including Penitentiaries	1·00	1·03	1·02
Labour	4·59	4·64	4·57
Legislation	0·43	0·43	0·38
Mines and Technical Surveys	1·98	2·06	2·61
National Defence	101·04	130·45	122·18
National Film Board	0·19	0·20	0·20
National Health and Welfare	35·60	28·17	29·13
National Research Council and Atomic Energy Control Board	1·79	1·96	1·90
National Revenue	3·86	3·28	3·38
Northern Affairs and National Resources	[1]	[1]	1·30
Post Office	6·99	7·31	7·68
Prime Minister's Office	0·29	0·26	0·25
Privy Council Office			
Public Archives	0·02	0·02	0·02
Public Printing and Stationery	0·08	0·11	0·14
Public Works	5·54	5·67	7·78
Resources and Development	2·27	2·47	[2]
Royal Canadian Mounted Police	1·95	2·16	2·29
Secretary of State	0·17	0·15	0·22
Trade and Commerce	1·56	1·15	1·12
Transport	7·13	7·20	7·98
Veterans Affairs	15·42	16·73	16·15
Grand Totals, Expenditure	**266·46**	**300·57**	**294·33**

[1] *See* Resources and Development.

[2] *See* Northern Affairs and National Resources.

Subsection 3.—Analysis of Revenue from Taxation

Table **11** gives a comparison of total expenditure with taxation revenue and total revenue for each of the fiscal years ended Mar. 31 since 1950. During the war years expenditure far exceeded revenue but in 1947 taxation met over 92 p.c. of expenditure and revenue from all sources exceeded expenditure. For 1948 and 1949, revenue from taxation alone exceeded total expenditure by a substantial amount owing to the maintenance of high taxation levels and a greatly increased national income.

11.—Relationship of Total Expenditure to Taxation Revenue and to Total Revenue, Years Ended Mar. 31, 1950-54

Note.—Figures for 1940-49 are given in the 1951 Year Book, p. 989.

Year	Total Expenditure	Taxation Revenue	Total Revenue	Percentage to Total Expenditure of—	
				Taxation Revenue	All Revenue
	$	$	$	p.c.	p.c.
1950	2,448,615,662	2,323,117,079	2,580,140,615	94·87	105·37
1951	2,901,241,698	2,785,349,899	3,112,535,948	96·01	107·28
1952	3,732,875,250	3,657,775,082	3,980,908,652	97·99	106·64
1953	4,337,275,512	3,997,592,937	4,360,822,789	92·17	100·54
1954	4,350,522,378	4,003,584,453	4,396,319,583	92·03	101·05

The following analysis of taxation revenue is confined to excise duties, excise taxes, income tax and succession duties; customs receipts constitute a single item in the *Public Accounts* and cannot be further analysed here.

Excise Duties

Excise duties proper are presented below with a summary of the excise tariff and statistics arising as a by-product of administration, such as the quantities of grain and other products used in distillation and the quantities of goods taken out of bond and subject to excise tax.

Canadian Excise Tariff.—The following is a statement of the Canadian excise tariff, as at Aug. 20, 1954:—

Spirits	per proof gal.	$12·00
Spirits used by licensed bonded manufacturers	per proof gal.	1·50
Spirits used in bond for manufacture of perfume	per proof gal.	Free
Spirits used in bond for manufacture of approved chemical compositions	per proof gal.	0·15
Spirits sold to druggists licensed under the Excise Act to be used exclusively in preparation of prescriptions for medicines and pharmaceutical preparations	per proof gal.	1·50
Spirits distilled from wine produced from native fruits, and used in any bonded manufactory for the treatment of domestic wine	per proof gal.	Free
Spirits imported and taken into a bonded manufactory (in addition to duties otherwise imposed)	per proof gal.	0·30
Spirits used directly in the manufacture of toilet preparations or cosmetics on which excise tax is applicable under Schedule I of the Excise Tax Act	per proof gal.	Free

Canadian brandy	per proof gal.	$10·00
Malt, all, when brought into a brewery	per lb.	0·21
Malt liquor or beer, when brewed in whole or in part from any substance other than malt	per Imp. gal.	0·42
Tobacco, manufactured, all descriptions except cigarettes	per lb.	0·35
Cigarettes, weighing not more than two and one-half pounds	per M	4·00
Cigarettes, weighing more than two and one-half pounds	per M	5·00
Cigars, all	per M	1·00
Raw leaf tobacco, imported, now dutiable under the customs tariff only.		
Canadian raw leaf tobacco, when sold for consumption	per lb.	0·20

A drawback of 99 p.c. of the duty may be granted when domestic spirits, testing not less than 50 p.c. over proof, are delivered in limited quantities for medicinal or research purposes to universities, scientific or research laboratories, bona fide public hospitals, or health institutions in receipt of Federal Government aid.

12.—Gross Excise Duties Collected, Years Ended Mar. 31, 1949-54

Item	1949	1950	1951	1952	1953	1954
	$	$	$	$	$	$
Spirits	40,634,697	46,547,587	60,126,300	45,944,724	48,627,965	69,194,020
Validation fee	825,371	790,587	1,108,252	1,223,933	746,877	—
Beer or malt liquor	3,740,065	3,678,316	2,745,851	3,812,065	5,294,283	4,799,823
Malt syrup	51,825	—	—	—	—	—
Malt	55,853,055	56,018,292	65,409,427	73,748,003	80,584,283	78,733,288
Tobacco and cigarettes	106,033,181	115,778,732	114,282,662	100,547,951	116,701,207	96,724,855
Cigars	207,823	203,043	203,945	162,968	212,817	245,862
Licences	39,115	38,241	38,009	36,092	38,183	36,519
Totals[1]	**207,385,132**	**223,054,798**	**243,914,446**	**225,475,736**	**252,205,615**	**249,734,366**

[1] These totals do not agree with net excise duties as shown in Table 8 owing to refunds and drawbacks and, for spirits, a transfer tax which is included here.

Statistics of Licences and Distillation.—As a result of the collection of excise duties, statistics are compiled of excise licences issued and of distillation.

13.—Statistics of Licences and Distillation, Years Ended Mar. 31, 1949-54

Item	1949	1950	1951	1952	1953	1954
Licences issued ... No.	27	28	28	29	29	29
Licence fees ... $	6,750	7,250	8,000	7,375	7,750	7,500
Grain, etc., used for distillation—						
Malt ... lb.	31,699,705	26,764,523	31,914,170	33,688,521	31,169,426	34,770,622
Indian corn ... "	176,368,186	162,568,138	209,060,163	211,851,336	193,629,683	223,715,461
Rye ... "	30,189,564	37,525,049	32,137,858	29,427,040	30,404,971	42,888,000
Wheat and other grain. "	15,462,635	2,887,990	13,174,382	17,925,256	17,996,080	828,440
Totals, Grain Used... lb.	253,720,090	229,745,700	286,286,573	292,892,153	273,200,160	302,202,523
Molasses used ... lb.	128,034,436	61,951,935	32,836,406	26,989,288	22,614,185	21,965,692
Wine and other materials "	8,733,086	5,237,900	8,496,194	8,330,301	4,674,714	3,696,117
Sulphide liquor ... gal.	98,080,000	89,712,658	86,454,960	99,344,940	98,380,740	394,040,231
Proof spirits manufactured ... proof gal.	23,643,036	20,741,268	23,551,259	24,742,386	22,517,166	24,710,625

The quantity of spirits manufactured has fluctuated greatly since 1920, varying from a low of 2,356,329 proof gal. in that year to a high of 35,555,059 proof gal. recorded in 1945.

Alcohol and Tobacco Taken Out of Bond.—The amounts of beverage spirits, malt beer, malt, cigars, cigarettes and other tobacco taken out of bond for consumption are given in Table 44, p. 1002.

Excise Taxes Collected

The statistics given in Table 14 represent gross excise tax collection by the Excise Division of the Department of National Revenue.

14.—Excise Taxes Collected, by Commodity and Province, Years Ended Mar. 31, 1949-54

(Accrued Revenue)

Commodity and Province	1949	1950	1951	1952	1953	1954
	$	$	$	$	$	$
Commodity						
Domestic—						
Amusements	2,587,398	...	...	...	...	...
Automobiles, tires and tubes	32,976,441	32,988,931	59,791,585	89,111,798	78,810,971	92,498,632
Beverages	27,684,207	1,627,143	7,187,086	19,159,576	12,342,608	11,577,882
Candy and chewing gum	19,543,584	1,030,143	9,914,041	10,845,824	11,216,434	11,812,938
Carbonic acid gas	332,677	...	150,827	377,207	214,538	220,859
Cigarette papers and tubes	6,706,224	6,887,029	7,369,511	382,121	—	—
Cigars, cigarettes and tobacco	77,529,716	82,574,363	84,203,237	104,806,864	100,678,509	110,946,708
Electrical and gas apparatus	3,619,983	...	1,607,101	3,731,560	3,269,802	3,701,518
Embossed cheques (departmental)	409,974	359,617	391,377	433,667	334,884	—
Furs	3,570,044	2,773,723	4,165,195	4,221,849	5,213,346	3,366,217
Gasoline	...	...	...	...	...	...
Licences	90,006	84,004	85,831	81,663	86,768	86,568
Lighters	403,537	269,302	242,495	320,122	235,889	218,211
Matches	2,994,124	756,837	755,311	1,387,225	1,071,159	1,019,072
Other manufactures' tax	16,739,711	6,911,787	9,235,677	22,779,222	13,176,366	11,200,616
Phonographs, radios and tubes	3,499,260	3,065,057	5,372,408	7,912,329	10,085,974	15,874,817[1]
Playing cards	614,400	648,000	834,400	665,200	723,600	709,600
Sales, domestic	342,075,177	363,308,872	406,350,795	521,173,389	611,362,280	633,817,293
Stamps	13,605,236	9,014,763	10,553,385	10,912,768	10,226,135	...
Sugar	...	...	...	...	...	...
Toilet preparations	7,582,907	4,246,481	4,452,144	8,233,581	6,961,538	6,768,726
Transportation and transmission	29,034,392	3,967,088	...	...	...	...
Wines	2,059,639	2,125,606	2,224,885	2,167,267	2,215,540	2,230,673
Penalties and interest	291,819	286,054	286,513	381,055	374,691	309,888
Totals, Domestic	593,950,456	522,924,800	615,173,804	809,084,287	868,601,032	906,360,218
Imported	55,058,635	60,317,200	82,100,696	114,865,035	135,346,520	146,539,166
Grand Totals[2]	**649,009,091**	**583,242,000**	**697,274,500**	**923,949,323[3]**	**1,003,947,546[3]**	**1,052,899,387[3]**
Province						
Newfoundland	...	2,928,142	3,071,105	4,222,529	4,731,662	4,626,420
Prince Edward Island	354,308	175,093	192,576	294,581	319,600	270,371
Nova Scotia	9,712,259	7,297,503	8,237,983	11,085,795	12,567,288	12,133,679
New Brunswick	6,092,221	4,765,769	5,410,375	7,020,959	7,565,327	7,560,701
Quebec	259,953,961	234,362,155	259,597,052	330,235,421	355,969,247	367,621,043
Ontario	311,081,866	285,628,445	364,386,263	493,684,889	532,863,493	571,852,942
Manitoba	20,255,931	15,186,782	16,957,296	23,477,085	26,006,361	25,871,465
Saskatchewan	5,207,665	3,712,245	4,068,319	5,780,443	6,897,755	7,533,164
Alberta	10,760,329	7,784,071	8,716,339	13,415,997	17,592,743	17,654,558
British Columbia	24,972,017	20,785,415	26,010,974	33,957,805	38,800,329	37,430,555
Yukon Territory	203,295	208,220	180,873	267,536	279,666	290,982
General for Canada—						
Departmental sales	409,974	359,620	391,376	433,668	334,884	...
Miscellaneous	2,334	46,268	52,484	71,452	17,695	51,712
British post-office parcels	2,932	2,272	1,485	1,163	1,495	1,796

[1] Total includes television sets and tubes ($11,340,860).

[2] Includes refunds and drawbacks

[3] Includes 2 p.c. sales tax.

Income Tax

Income Tax Collections by the Department of National Revenue on a Fiscal Year Basis.—Statistics of income tax collections are gathered at the time the payments are made and are, therefore, up-to-date. Over 85 p.c. of individual taxpayers are wage or salary earners who have almost the whole of their tax liability deducted at the source by their employers. All other taxpayers are required to pay most of their estimated tax during the taxation year. As a result, most of the tax is collected during the same year in which the related income is earned, and only a limited residue remains to be collected when the returns are filed. The collections for a given fiscal year include tax deductions and instalments for twelve months, embracing portions of two taxation years, and a mixture of year-end payments for the first of these years and for the preceding year, and cannot, therefore, be closely related to the statistics for a given taxation year. As little information about a taxpayer is received when the payment is made, and as a single cheque from one employer may frequently cover the tax payments of hundreds of employees, the payments cannot be statistically related to taxpayers by occupation or income. Descriptive classifications of taxpayers are available only from tax returns, but collection statistics, if interpreted with the current tax structure and the above factors in mind, indicate the trend of income in advance of the final compilation of statistics.

The statistics given in Table **15** pertain to tax collections by the Taxation Division of the Department of National Revenue. The collections are for fiscal years ended Mar. 31.

15.—Taxes Collected by the Taxation Division of the Department of National Revenue, Years Ended Mar. 31, 1947-54

NOTE.—Figures for 1917-34 are given in the 1947 Year Book, pp. 999-1000, for 1935-46 in the 1951 edition, p. 994.

Fiscal Year Ended Mar. 31—	Income Tax			Excess Profits Tax	Succession Duties	Total Collections
	Individual	Corporation	Total			
	$	$	$	$	$	$
1947......	724,666,292[1]	238,791,953	963,458,245[1]	448,697,443[1]	23,576,071	1,435,731,759[1]
1948......	695,717,243	364,131,114	1,059,848,357	227,030,494	30,828,040	1,317,706,891
1949......	806,009,280	491,990,124	1,297,999,404	44,791,918	25,549,777	1,368,341,099
1950......	669,457,059	603,193,132	1,272,650,191	−1,788,387[2]	29,919,780	1,300,781,584
1951......	713,938,999	799,196,511	1,513,135,510	10,140,910	33,599,089	1,556,875,509
1952......	1,030,793,334[3]	1,132,680,074[3]	2,163,473,408[3]	2,364,909	38,207,985	2,204,046,302
1953......	1,278,949,939[3]	1,276,940,150[3]	2,555,890,089[3]	—	38,070,529	2,593,960,618
1954......	1,332,116,907[3]	1,246,786,598[3]	2,578,903,505[3]	—	39,137,594	2,618,041,099

[1] Includes refundable portion of taxes. [2] Refunds arising out of renegotiation of war contracts were in excess of collections. [3] Includes old age security tax.

Individual Income-Tax Statistics.—Individual income-tax statistics are presented in Table **16** on a calendar-year basis, and are compiled from a 10-p.c. sample of all returns received. Taxpayers are shown for certain selected cities and occupational classifications.

16.—Number of Taxpayers, and Amounts of Income and Tax, by Selected Cities and Occupational Class, 1952

City and Class	Tax-payers	Total Income Declared	Tax Payable[1]
City	No.	$'000	$'000
St John's, N'f'ld	12,940	42,359	4,280
Halifax	32,100	97,094	8,810
Saint John	18,100	53,338	4,486
Montreal	409,620	1,408,604	162,346
Quebec	39,480	129,204	13,866
Sherbrooke	11,280	34,108	2,861
Ottawa	73,530	242,974	27,272
Toronto	468,620	1,619,364	206,026
Oshawa	15,670	53,181	5,578
Hamilton	92,460	311,486	33,660
St. Catharines	20,850	73,575	8,181
Niagara Falls	16,240	56,084	5,949
Kitchener	24,780	80,963	9,601
London	40,170	125,732	12,903
Windsor	48,740	164,295	15,905
Sudbury	19,180	65,817	6,375
Fort William and Port Arthur	26,780	89,333	8,965
Winnipeg	115,320	364,684	37,364
Regina	26,290	83,063	8,743
Saskatoon	17,770	55,919	5,677
Calgary	52,590	179,933	20,888
Edmonton	66,270	214,956	23,294
Vancouver	163,090	548,834	61,007
New Westminster	20,070	61,350	5,272
Victoria	31,210	104,928	11,545
Other localities	1,261,950	4,012,855	360,929
Grand Total	**3,125,100**	**10,274,033**	**1,071,783**
Occupational Class			
Farmers	67,830	269,048	27,505
Forestry operators	1,630	7,176	919
Fishermen	2,640	9,852	1,052
Totals, Primary Producers	**72,100**	**286,076**	**29,476**
Accountants	2,310	18,541	4,321
Medical doctors	9,520	100,172	23,967
Dentists	3,790	26,956	4,496
Lawyers and notaries	5,050	46,572	10,730
Engineers and architects	1,740	21,343	6,341
Entertainers	1,980	8,915	1,222
Osteopaths, etc.	1,450	7,940	1,128
Nurses	3,420	6,476	466
Other professionals	2,440	10,240	1,370
Totals, Professionals	**31,700**	**247,155**	**54,041**
Employees	2,753,590	8,361,048	753,393
Salesmen	33,230	152,826	19,341
Business proprietors, without employees	22,240	66,538	4,963
Business proprietors, with employees	85,480	450,791	70,842
Partners in business	50,600	293,752	56,714
Totals, Business Proprietors	**158,320**	**811,081**	**132,519**
Investors	55,870	332,389	73,788
Pensioners	8,370	26,637	2,511
All others	11,920	56,821	6,714
Grand Total	**3,125,100**	**10,274,033**	**1,071,783**

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[1] Includes old age security tax.

17.—Individual Income-Tax Statistics, by Income Class, 1951 and 1952

Income Class	Taxpayers		Total Income Declared		Tax Payable		Average Tax	
	1951	1952	1951	1952	1951	1952[1]	1951	1952[1]
	No.	No.	$'000	$'000	$'000	$'000	$	$
Under $1,000	17,910	24,550	10,247	15,633	655	1,027	37	42
$1,000 to $1,100	55,180	53,210	58,689	56,443	635	746	12	14
$1,100 to $1,200	65,360	67,890	75,227	78,422	1,476	1,794	23	26
$1,200 to $1,300	72,270	69,860	90,107	87,124	2,633	2,878	36	41
$1,300 to $1,400	74,350	71,100	100,363	95,822	3,845	4,110	52	58
$1,400 to $1,500	76,230	71,360	110,504	103,275	5,075	5,344	67	75
$1,500 to $1,600	77,680	77,950	120,292	120,591	6,145	6,893	79	88
$1,600 to $1,700	78,180	75,630	129,421	124,690	7,358	7,870	94	104
$1,700 to $1,800	75,730	76,660	132,412	133,889	8,189	9,196	108	120
$1,800 to $1,900	73,000	77,310	135,140	142,762	8,907	10,473	122	135
$1,900 to $2,000	67,020	71,160	130,800	138,934	9,127	10,855	136	153
$1,000 to, but not including, $2,000	715,000	712,130	1,082,955	1,081,952	53,390	60,159	75	84

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[1] Includes old age security tax.

17.—Individual Income-Tax Statistics, by Income Class, 1951 and 1952—concluded

Income Class	Taxpayers		Total Income Declared		Tax Payable		Average Tax	
	1951	1952	1951	1952	1951	1952[1]	1951	1952[1]
	No.	No.	$'000	$'000	$'000	$'000	$	$
$2,000 to $2,100	78,750	78,090	161,786	160,015	10,080	11,373	128	146
$2,100 to $2,200	82,540	82,860	177,393	178,133	10,678	12,531	129	151
$2,200 to $2,300	85,840	89,810	193,132	201,849	11,171	13,764	130	153
$2,300 to $2,400	99,360	94,110	233,159	221,006	12,440	14,338	125	152
$2,400 to $2,500	98,270	102,770	240,739	251,558	12,505	15,724	127	153
$2,500 to $2,600	104,940	106,350	267,657	271,173	13,491	16,881	129	159
$2,600 to $2,700	103,950	109,900	275,169	290,894	13,677	17,623	132	160
$2,700 to $2,800	107,230	109,880	294,729	301,936	14,622	18,505	136	168
$2,800 to $2,900	102,710	107,660	292,423	306,398	14,900	18,582	145	173
$2,900 to $3,000	98,030	105,090	288,793	309,852	14,991	19,312	153	184
$2,000 to, but not including, $3,000	961,620	986,520	2,424,980	2,492,814	128,555	158,633	134	161
$3,000 to $3,500	407,470	481,220	1,315,207	1,556,341	75,983	105,007	186	218
$3,500 to $4,000	236,180	327,530	879,676	1,220,110	60,658	95,946	257	293
$4,000 to $4,500	134,580	191,550	568,599	809,162	44,925	73,403	334	383
$4,500 to $5,000	77,170	111,660	365,435	527,428	32,516	53,315	421	477
$3,000 to, but not including, $5,000	855,400	1,111,960	3,128,917	4,113,041	214,082	327,671	250	295
$5,000 to $6,000	84,620	113,790	459,439	617,618	46,723	70,591	552	620
$6,000 to $7,000	41,320	54,790	266,971	352,817	31,910	46,316	772	845
$7,000 to $8,000	23,520	29,610	175,648	220,593	23,478	31,994	998	1,081
$8,000 to $9,000	16,350	18,500	138,924	156,228	20,560	24,608	1,257	1,330
$9,000 to $10,000	11,080	13,610	105,404	128,644	16,701	22,024	1,507	1,618
$5,000 to, but not including, $10,000	176,890	230,300	1,146,386	1,475,900	139,372	195,533	788	849
$10,000 to $15,000	28,280	33,740	339,645	406,292	64,199	82,771	2,270	2,453
$15,000 to $20,000	10,070	11,940	171,948	203,799	42,941	53,800	4,264	4,506
$20,000 to $25,000	4,520	5,460	100,603	121,548	29,838	37,761	6,601	6,916
$10,000 to, but not including, $25,000	42,870	51,140	612,196	731,639	136,978	174,332	3,195	3,409
$25,000 to $50,000	6,690	6,660	221,746	220,039	80,507	84,155	12,034	12,636
$50,000 or over	1,570	1,840	120,123	143,015	58,528	70,273	37,279	38,192
$25,000 or over	8,260	8,500	341,869	363,054	139,035	154,428	16,832	18,168
Grand Totals	**2,777,950**	**3,125,100**	**8,747,550**	**10,274,033**	**812,067**	**1,071,783**	**292**	**343**

[1] Includes old age security tax.

Corporation Income-Tax Statistics.—Corporation statistics presented in Tables 18 and 19 are on a taxation-year basis prior to assessment. The data were extracted and compiled from the returns shortly after they were filed and are as declared by the taxpayer without the scrutiny or revision of the Department of National Revenue. Provincial figures contain an unavoidable bias in favour of Ontario and Quebec because many large corporations operating across Canada file their returns in one or other of these two Provinces.

18.—Summary Statistics for Corporations Reporting a Profit, Taxation Years 1951 and 1952

Item	1951			1952		
	Corporations Reporting	Current Year Profit	Income Tax Declared	Corporations Reporting	Current Year Profit	Income Tax Declared[1]
	No.	$'000	$'000	No.	$'000	$'000
Active taxable corporations—excluding co-operatives and Crown corporations	30,992	2,786,338	1,161,643	32,432	2,630,897	1,228,819
Inactive corporations	754	491	105	790	699	180
Co-operatives	1,974	8,521	2,352	1,999	9,619	3,295
Crown corporations	—	—	—	7	12,719	6,579
Totals, Taxable Corporations	33,720	2,795,350	1,164,100	35,228	2,653,934	1,238,873
Personal corporations	1,206	20,458	—	1,343	21,777	—
Other exempt corporations[2]	2,378	34,934	36	2,275	24,744	12
Grand Totals—Taxable and Exempt	**37,304**	**2,850,742**	**1,164,136**	**38,846**	**2,700,455**	**1,238,885**

[1] Includes old age security tax. [2] Includes foreign corporations paying $100 filing fee which is recorded here as tax declared.

19.—Distribution of Active Taxable Corporations Reporting a Profit, by Income Class, Industry and Province, Taxation Years, 1951 and 1952

Income Class, Industrial Division and Province	1951			1952		
	Corporations Reporting	Current Year Profit	Income Tax Declared	Corporations Reporting	Current Year Profit	Income Tax Declared[1]
	No.	$'000	$'000	No.	$'000	$'000
Income Class						
Under $1,000	4,404	1,848	226	4,693	2,037	312
$1,000 to $2,000	2,810	4,060	570	2,932	4,294	715
$2,000 to $3,000	2,166	5,324	792	2,209	5,429	970
$3,000 to $4,000	1,661	5,745	866	1,858	6,434	1,228
$4,000 to $5,000	1,420	6,334	989	1,522	6,798	1,289
$5,000 to $10,000	5,726	43,375	6,838	6,483	49,175	9,873
$10,000 to $15,000	2,877	34,704	6,985	2,965	35,519	8,772
$15,000 to $20,000	1,483	25,705	6,865	1,466	25,405	7,973
$20,000 to $25,000	1,047	23,350	7,076	1,100	24,582	8,625
$25,000 to $50,000	2,680	94,531	32,359	2,603	92,437	36,652
$50,000 to $100,000	1,808	126,819	48,237	1,756	125,246	54,857
$100,000 to $250,000	1,553	245,844	98,989	1,476	232,351	108,469
$250,000 to $500,000	643	224,664	94,378	639	219,490	103,358
$500,000 to $1,000,000	329	227,061	96,187	364	250,557	121,610
$1,000,000 to $5,000,000	302	625,906	271,314	293	599,845	290,737
Over $5,000,000	83	1,091,068	488,972	73	951,298	473,379
Totals	**30,992**	**2,786,338**	**1,161,643**	**32,432**	**2,630,897**	**1,228,819**
Industrial Division						
Agriculture, fishing and forestry	613	21,580	8,075	568	13,943	5,767
Mining	425	208,653	91,792	469	161,600	78,951
Manufacturing	8,113	1,594,402	686,449	8,233	1,424,785	685,623
Construction	1,652	53,051	19,306	1,789	66,419	28,471
Public utilities	1,581	237,196	102,145	1,681	267,314	125,746
Wholesale trade	5,594	268,288	107,008	5,702	252,725	114,747
Retail trade	5,931	181,140	66,089	6,280	169,664	72,839
Service	3,162	52,575	18,432	3,593	63,071	25,545
Finance	3,889	169,229	62,286	4,088	211,135	91,050
Unclassified	32	224	61	29	241	80
Province						
Newfoundland	345	29,881	12,453	377	27,931	13,106
Prince Edward Island	153	3,018	747	156	3,015	878
Nova Scotia	1,117	46,923	19,378	1,185	50,203	23,279
New Brunswick	743	43,213	17,843	766	31,279	12,907
Quebec	8,189	889,294	374,588	8,477	827,833	375,478
Ontario	10,790	1,258,420	527,602	11,235	1,234,917	593,806
Manitoba	1,729	101,181	41,268	1,762	98,791	46,714
Saskatchewan	855	16,488	5,786	915	20,117	8,403
Alberta	2,085	87,093	33,524	2,325	101,069	45,087
British Columbia	4,986	310,827	128,454	5,234	235,742	109,161

[1] Includes old age security tax.

Succession Duties

The first imposition of succession duties in Canada was in 1892, when Nova Scotia, New Brunswick, Quebec and Ontario enacted legislation of this nature. Legislation was passed in the other provinces in the following years: Manitoba, 1893; Prince Edward Island and British Columbia, 1894; Saskatchewan and Alberta, 1905. The Federal Government first imposed succession duties in 1941. Current legislation is the Dominion Succession Duty Act (R.S.C. 1952, c. 89).

Table **20** shows the receipts of the various governments from this source for 1952, 1953 and 1954.

In 1947, seven provinces—Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan, Alberta and British Columbia — withdrew from the succession-duty field. The seven provinces entered into agreements with the Federal Government to 'rent out' the succession-duty field for the period Apr. 1, 1947, to Mar. 31, 1952. Accordingly, in these provinces, the previous combination of federal and provincial succession duties was replaced by a single federal succession duty at double the previous federal level which, for most provinces, resulted in a combined duty approximately the same as previously levied under the separate federal and provincial duties. The Provinces of Quebec and Ontario did not enter into the agreements but the doubled rates of federal duty were applied and are capable of being reduced up to one-half by a credit for the duty paid to these Provinces. Yukon Territory in 1948, and the Province of Newfoundland in 1949, entered into a similar tax-rental agreement.

In 1952, the tax-rental agreements expired but new five-year agreements were negotiated with the same eight provinces which again elected not to tax in the succession-duty field. The Province of Ontario also entered into an agreement on income tax, but elected to continue to tax in the succession-duty field. Consequently, in all the provinces of Canada the situation in regard to succession duty is likely to be the same as that described above until Mar. 31, 1957.

Double taxation of estates resulting from taxation of the same property by more than one Canadian jurisdiction has been common in the past, but with the withdrawal of eight of the provinces from the field, and an interprovincial agreement between Ontario and Quebec, the credit provision of the federal legislation has reduced this problem considerably. In the international field, dual taxation has been dealt with by way of tax conventions. A tax convention between Canada and the United States was signed on June 8, 1944, and amended effective Nov. 21, 1951. An agreement respecting succession duties was signed June 5, 1946, between Canada and the United Kingdom. A convention between Canada and France, signed on Mar. 16, 1951, came into effect on July 2, 1953.

20.—Federal and Provincial Net Revenue from Succession Duties, Years Ended Mar. 31, 1952-54

NOTE.—Statistics for 1948-51 are given in the 1954 Year Book, p. 1080.

Province	1952	1953	1954
	$'000	$'000	$'000
Federal	38,208	38,071	39,138
Provincial—[1]			
Newfoundland	—	—	—
Prince Edward Island	12	—	1
Nova Scotia	25	2	5

For footnote, *see* end of table.

20.—Federal and Provincial Net Revenue from Succession Duties, Years Ended Mar. 31, 1952-54—concluded

Province	1952	1953	1954
	$'000	$'000	$'000
Provincial[1]—concluded			
New Brunswick	1	6	—
Quebec	12,248	12,500	13,000
Ontario	21,652	19,500	16,500
Manitoba	15	2	3
Saskatchewan	30	44	—
Alberta	25	25	15
British Columbia	—	—	—

[1] Under terms of the 1952 Dominion-Provincial Taxation Agreements all provinces, except Ontario and Quebec, refrain from levying succession duties; amounts shown in other provinces are arrears. Provincial figures for 1953 are preliminary; figures for 1954 are estimates only.

Federal Duty.—Beneficiaries are divided into four classes, as follows:—

(1) Widow or dependent child or dependent grandchild.

(2) Husband; parent; grandparent; child over 18 years of age, not infirm; son- or daughter-in-law.

(3) Lineal ancestor other than parent or grandparent; brother, sister or their descendant; uncle or aunt or their descendant.

(4) Others.

No duty is payable on estates not exceeding $50,000, or on bequests of up to $1,000 to any one individual, nor is duty levied on gifts to the Federal Government or provinces, on residential property of certain diplomatic or consular officials, on pensions administered by the Canadian Pensions Commission or those payable by allied nations for war services, nor on insurance moneys or annuities if the person with whom the contract was made was domiciled outside Canada at the time of death. Provision is made for increased exemptions and reduced duties for those dying as a result of war service. Bequests to non-profit charitable organizations in Canada are exempt.

Widows are exempt up to $20,000, dependent children to $5,000 each and, where dependent children do not benefit, the widow's exemption is increased by $5,000 for each child who does not benefit. For dependent orphaned children, there is a further exemption of $15,000 (in addition to $5,000) divisible proportionately among such orphans according to their number and the value of each individual benefit. Duty is payable on the excess only when the limit is passed, i.e., these exemptions are deductible exemptions.

Gifts made during the lifetime of the deceased are exempt if the transfer was carried out more than three years prior to his death and the recipient of such gifts secured full possession at the time of the transfer and the donor (the deceased), thereafter, did not retain any rights therein or secure any benefits therefrom.

If gift tax payable under the provisions of the Income Tax Act has been paid in connection with the transfer made by a deceased person during his lifetime then no succession duty is payable in respect of such gift except to the extent that succession duty thereon is in excess of the gift tax.

The difficulties of working out succession-duty tables to show the combined effects of federal and provincial duties are readily realized. The best that can be done here is to choose typical estates in the main classes laid down in the legislation and give examples of the combined duties applicable to them. This has been attempted in Tables **21**, **22** and **23**.

Examples of the rates of duty and duty levied are given in Table **21.**

21.—Occurrence of Succession Duties in all Provinces (except Quebec and Ontario) on Typical Estates

Class	Aggregate Net Value	Dutiable Value	Rate	Duty
	$	$	p.c.	$
A. Widow only	60,000	40,000	10·6	4,240
	100,000	80,000	14·7	11,760
	300,000	280,000	26·7	74,760
	500,000	480,000	32·7	156,960
	1,000,000	980,000	38·7	379,260
B. Only child over 25 years	60,000	60,000	11·9	7,140
	100,000	100,000	16·7	16,700
	300,000	300,000	28·7	86,100
	500,000	500,000	34·7	173,500
	1,000,000	1,000,000	40·7	407,000
C. Brother or sister	60,000	60,000	13·9	8,340
	100,000	100,000	18·7	18,700
	300,000	300,000	30·7	92,100
	500,000	500,000	36·7	183,500
	1,000,000	1,000,000	42·7	427,000
D. Stranger	60,000	60,000	15·9	9,540
	100,000	100,000	20·7	20,700
	300,000	300,000	32·7	98,100
	500,000	500,000	38·7	193,500
	1,000,000	1,000,000	44·7	447,000

Occurrence of Combined Federal and Provincial Succession Duties.—Only the Provinces of Quebec and Ontario have retained their own succession duties. In Tables **22** and **23**, for all classes of beneficiaries, the duties collectable are shown where an estate of given value is left to one beneficiary only. It would be impossible to cover the many different combinations of the various beneficiaries and the exemptions and saving clauses to be found in the legislation of the respective provinces. Each estate is, moreover, assumed to be wholly situated within the province and the beneficiary domiciled therein to be the sole heir.

Quebec.—The current legislation under which succession duties are collected is S.Q. 1943, c. 18, as amended. As stated above, the following text and table can give only a broad outline of such duties as are applied to comparable classes of beneficiaries in other provinces. Full details regarding other cases may be obtained from the Act or from the Collector of Succession Duties, Provincial Revenue Offices, Quebec, Que.

Under the legislation, beneficiaries are divided into three classes, as follows:—

(1) Those in direct ascending or descending line, of a relationship between consorts, between father- or mother-in-law and son- or daughter-in-law, or between step-father or step-mother and step-son or step-daughter. There is no limitation of degree in the direct ascending or descending line in these relationships.

(2) Those in collateral line including a brother or sister, or descendant of a brother or sister of the deceased; or to a brother or sister or son or daughter of a brother or sister of the father or mother of the deceased.

(3) Others.

No duty is payable when the aggregate value of the property passing to persons in Class (1) does not exceed $10,000; in an estate, the aggregate value of which does not exceed $50,000, this sum is increased by $1,500 for each child, in the first degree, under 25 years of age, domiciled in the Province, left by and surviving the deceased (15-16 Geo. VI, c. 14). If the whole value of the estate is less than $1,000, bequests to collateral relatives are exempt. No duty is payable on bequests of up to $1,000 to beneficiaries in Class (3) who have been in the employ of the testator for five years or more. In estates that devolved prior to Mar. 10, 1949, no duty is payable on legacies for religious, charitable or educational purposes in Quebec and the same privilege is extended to legacies for similar work outside the Province, provided that the province or State within which the work is to be carried out extends reciprocal privileges under its succession duty laws. Since Mar. 10, 1949 (13 Geo. VI, c. 32), all legacies, gifts and subscriptions for religious, charitable and educational purposes are tax-free, regardless of the country, province or State where the institutions benefiting therefrom are located.

22.—Occurrence of Federal and Quebec Succession Duties on Typical Estates

Class	Aggregate Net Value	Federal Duty[1]			Provincial Duty			Combined Duties[2]
		Dutiable Value	Rate	Duty	Dutiable Value	Rate	Duty	
	$	$	p.c.	$	$	p.c.	$	$
A. Widow only........	20,000	—	—	—	20,000	2·80	560	560
	25,000	—	—	—	25,000	3·00	750	750
	50,000	—	—	—	50,000	4·00	2,000	2,000
	60,000	40,000	10·60	4,240	60,000	5·60	3,360	5,480
	100,000	80,000	14·70	11,760	100,000	8·00	8,000	13,880
	300,000	280,000	26·70	74,760	300,000	12·00	36,000	74,760
	500,000	480,000	32·70	156,960	500,000	15·50	77,500	156,960
	1,000,000	980,000	38·70	379,260	1,000,000	23·00	230,000	419,630
B. Only child over 25 years...........	20,000	—	—	—	20,000	2·80	560	560
	25,000	—	—	—	25,000	3·00	750	750
	50,000	—	—	—	50,000	4·00	2,000	2,000
	60,000	60,000	11·90	7,140	60,000	5·60	3,360	7,140
	100,000	100,000	16·70	16,700	100,000	8·00	8,000	16,700
	300,000	300,000	28·70	86,100	300,000	12·00	36,000	86,100
	500,000	500,000	34·70	173,500	500,000	15·50	77,500	173,500
	1,000,000	1,000,000	40·70	407,000	1,000,000	23·00	230,000	433,500
C. Brother or sister...	20,000	—	—	—	20,000	7·80	1,560	1,560
	25,000	—	—	—	25,000	8·50	2,125	2,125
	50,000	—	—	—	50,000	12·00	6,000	6,000
	60,000	60,000	13·90	8,340	60,000	13·40	8,040	12,210
	100,000	100,000	18·70	18,700	100,000	16·00	16,000	25,350
	300,000	300,000	30·70	92,100	300,000	19·00	57,000	103,050
	500,000	500,000	36·70	183,500	500,000	21·67	108,350	200,100
	1,000,000	1,000,000	42·70	427,000	1,000,000	28·33	283,300	496,800
D. Stranger...........	20,000	—	—	—	20,000	14·00	2,800	2,800
	25,000	—	—	—	25,000	14·50	3,625	3,625
	50,000	—	—	—	50,000	17·00	8,500	8,500
	60,000	60,000	15·90	9,540	60,000	18·00	10,800	15,570
	100,000	100,000	20·70	20,700	100,000	22·00	22,000	32,350
	300,000	300,000	32·70	98,100	300,000	25·75	77,250	126,300
	500,000	500,000	38·70	193,500	500,000	28·25	141,250	239,000
	1,000,000	1,000,000	44·70	447,000	1,000,000	34·50	345,000	568,500

[1] The rates of federal duty shown are those actually applied but a credit may be made to the taxpayer of up to one-half of this amount on account of duty paid to the Province; *see* p. 1144. [2] After deduction of credit on federal duty.

Ontario.—The current legislation on succession duties is R.S.O. 1950, c. 378, as amended. Full information may be obtained on application to the Succession Duty Office, Treasury Department, Parliament Buildings, Toronto, Ont.

Beneficiaries are divided into three classes, as follows:—

(1) Widow; child; husband; parent; grandparent; grandchild; son- or daughter-in-law.

(2) Brother; sister; nephew; niece; uncle; aunt; cousin; child of nephew or niece.

(3) Others.

No duty is payable on estates not exceeding $5,000 in aggregate value, nor on estates not exceeding $50,000 willed to persons in Class (1), nor on those not exceeding $10,000 willed to persons in Class (2).

Where any person in Class (3) was in the employ of the deceased for at least five years immediately prior to his death, no duty is payable with respect to any benefits which such person derived from the deceased where the total value of such benefits is not in excess of $1,000. Such benefits, though exempt are, nevertheless, taken as a factor in fixing the rates applicable to the dutiable portions of the estate.

Bequests for religious or educational purposes to any religious or educational organization which carries on its work solely in Canada, and bequests for charitable purposes to any charitable organization which carries on its work solely in Ontario, are exempt from duty and are ignored altogether in the computation of duty on the portions of the estate that are not exempt. The same rule applies to bequests to the Canadian National Institute for the Blind, the Canadian Red Cross Society and other approved patriotic organizations.

23.—Occurrence of Federal and Ontario Succession Duties on Typical Estates

Class	Aggregate Net Value	Federal Duty[1]			Provincial Duty			Combined Duties[2]
		Dutiable Value	Rate	Duty	Dutiable Value	Rate	Duty	
	$	$	p.c.	$	$	p.c.	$	$
A. Widow only	20,000	—	—	—	—	—	—	—
	25,000	—	—	—	—	—	—	—
	50,000	—	—	—	—	—	—	—
	60,000	40,000	10·60	4,240	60,000	4·60	3,174[3]	5,294
	100,000	80,000	14·70	11,760	100,000	7·50	8,625[3]	14,505
	300,000	280,000	26·70	74,760	300,000	10·00	34,500[3]	74,760
	500,000	480,000	32·70	156,960	500,000	12·50	71,875[3]	156,960
	1,000,000	980,000	38·70	379,260	1,000,000	18·00	207,000[3]	396,630
B. Only child over 25 years	20,000	—	—	—	—	—	—	—
	25,000	—	—	—	—	—	—	—
	50,000	—	—	—	50,000	2·50	1,438[3]	1,438
	60,000	60,000	11·90	7,140	60,000	4·60	3,174[3]	7,140
	100,000	100,000	16·70	16,700	100,000	7·50	8,625[3]	16,975
	300,000	300,000	28·70	86,100	300,000	10·00	34,500[3]	86,100
	500,000	500,000	34·70	173,500	500,000	12·50	71,875[3]	173,500
	1,000,000	1,000,000	40·70	407,000	1,000,000	18·00	207,000[3]	410,500
C. Brother or sister	20,000	—	—	—	20,000	8·60	2,064[4]	2,064
	25,000	—	—	—	25,000	9·15	2,745[4]	2,745
	50,000	—	—	—	50,000	11·90	7,140[4]	7,140
	60,000	60,000	13·90	8,340	60,000	13·00	9,360[4]	13,530
	100,000	100,000	18·70	18,700	100,000	15·20	18,240[4]	27,590
	300,000	300,000	30·70	92,100	300,000	18·00	64,800[4]	110,850
	500,000	500,000	36·70	183,500	500,000	20·50	123,000[4]	214,750
	1,000,000	1,000,000	42·70	427,000	1,000,000	26·00	312,000[4]	525,500
D. Stranger	20,000	—	—	—	20,000	13·10	3,275[5]	3,275
	25,000	—	—	—	25,000	13·40	4,188[5]	4,188
	50,000	—	—	—	50,000	15·00	9,375[5]	9,375
	60,000	60,000	15·90	9,540	60,000	15·50	11,625[5]	16,395
	100,000	100,000	20·70	20,700	100,000	17·50	21,875[5]	32,225
	300,000	300,000	32·70	98,100	300,000	22·50	84,375[5]	133,425
	500,000	500,000	38·70	193,500	500,000	27·50	171,875[5]	268,625
	1,000,000	1,000,000	44·70	447,000	1,000,000	35·00	437,500[5]	661,000

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[1] The rates of federal duty shown are those actually applied but a credit may be made to the taxpayer of up to one-half of this amount on account of duty paid to the Province; *see* p. 1144.

[2] After deduction of credit on federal duty but inclusive of surtax on provincial duty.

[3] Includes a surtax of 15 p.c.

[4] Includes a surtax of 20 p.c.

[5] Includes a surtax of 25 p.c.

Subsection 4.—Subsidies and Taxation Agreements with the Provinces

Subsidies.—By the provisions of the British North America Act and subsequent arrangements entered into from time to time, the Federal Government makes certain annual payments to the Provinces.

Interest on Debt Allowance.—By the terms of the union of the provinces at Confederation in 1867, the Federal Government assumed all the outstanding debts and liabilities of the provinces and undertook to pay, except to Ontario and Quebec, interest at 5 p.c. per annum on the amounts by which the actual per capita indebtedness of the provinces fell short of a basic debt allowance calculated at approximately $25 per capita. On the subsequent entry of additional provinces into Confederation, similar arrangements were effected regarding the assumption of their pre-Confederation indebtedness. From time to time, adjustments have been made in the basis of calculating the debt allowances of provinces; moreover, the Federal Government pays interest at 5 p.c. per annum on the amounts by which the actual debts of the provinces, on their entry into Confederation, fell short of the allowed debts as adjusted.

Allowances for Governments and Legislatures.—Under the terms of the union, annual specific grants were made to the various provinces toward the support of their governments and legislatures. These amounts vary with the population of the provinces, according to the following scale approved in 1907:—

Where population is—	$
Under 150,000	100,000
150,000, but does not exceed 200,000	150,000
200,000, " " 400,000	180,000
400,000, " " 800,000	190,000
800,000, " " 1,500,000	220,000
Over 1,500,000	240,000

Allowances per Capita of Population.—Under the British North America Act of 1867, a grant of 80 cents per capita of population was allowed to each province. The British North America Act of 1907 provided that the grant would be paid to each province at the rate of 80 cents per capita up to a population of 2,500,000, and at the rate of 60 cents per capita for so much of the population as exceeded that number. These allowances were last adjusted in 1951 following the decennial Census.

The Act to approve the Terms of Union of Newfoundland with Canada in 1949 provided for an annual subsidy equal to 80 cents per capita of the population of the Province (being taken at 325,000 until the first decennial Census after the date of union), subject to increase to conform with the scale of grants authorized by the British North America Act, 1907.

Special Grants.—For certain of the provinces, grants have been added to the original scale of subsidies because of special circumstances.

PRINCE EDWARD ISLAND.—Various special grants totalling $155,880 per annum.

NEW BRUNSWICK.—An annual grant of $150,000 since 1875 in consideration of the repeal of lumber duties reserved to the Province by the British North America Act of 1867.

MANITOBA.—A special grant on the basis of population amounting at present to $562,500 per annum.

Saskatchewan and Alberta.—An annual sum as compensation for loss of public lands revenue, based on their respective populations and amounting at present to $750,000 for Saskatchewan and $750,000 for Alberta.

British Columbia.—A special grant in lieu of lands amounting at present to $100,000 per annum.

Additional Special Grants.—Additional special grants were voted annually to the Maritime Provinces, Manitoba, Saskatchewan and British Columbia until 1941; they were suspended when the Wartime Tax Agreements, 1942, came into force. The grants were paid in 1947 and later years to the three Maritime Provinces, under the provisions of the Maritime Additional Subsidies Act, 1942. The Terms of Union with Newfoundland, 1949, provide for an additional annual subsidy of $1,100,000 in recognition of the special problems of its geography and its sparse and scattered population.

24.—Subsidy Allowances to Provincial Governments, Years Ended Mar. 31, 1948-54[1]

Province	1948	1949	1950	1951	1952[2] 1953 1954
	$	$	$	$	$
Newfoundland[3]	...	...	1,925,000	1,540,000	1,569,133
Prince Edward Island	656,932	656,932	656,932	656,932	656,932
Nova Scotia	2,005,140	2,005,140	2,005,140	2,005,140	2,056,838
New Brunswick	1,632,386	1,632,386	1,632,386	1,632,386	1,679,022
Quebec	2,866,590	2,866,590	2,866,590	2,866,590	3,300,869
Ontario	3,155,007	3,155,007	3,155,007	3,155,007	3,640,940
Manitoba	1,722,202	1,715,623	1,767,315	1,750,084	1,755,317
Saskatchewan	10,079,651[4]	2,041,525	2,071,900	2,061,775	2,040,757
Alberta	10,272,767[4]	2,018,039	2,086,043	2,063,375	2,126,976
British Columbia	1,003,440	1,003,440	1,003,440	1,003,440	1,281,319
Totals	**33,394,115**	**17,094,682**	**19,169,753**	**18,734,729**	**20,108,103**

[1] Does not include additional payments under the Wartime Tax Agreements or the Tax Rental Agreements. [2] Subsidies for the years 1953 and 1954 are the same as those shown for 1952. [3] Excludes the transitional grant allowed to this Province under the Terms of Union. [4] Includes a payment of $8,031,250 under authority of the Western Provinces Treasury Bills and Natural Resources Settlement Act.

25.—Individual Subsidy Allowances, by Province, Year Ended Mar. 31, 1954

(Thousands of Dollars)

Subsidy	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Allowance for governments	180	100	190	190	240	240	190	220	220	220	1,990
Allowance on basis of population	289	87	514	413	2,933	3,259	621	666	752	932	10,466
Interest on debt allowance	—	39	53	26	128	142	382	405	405	29	1,609
Special Grants—											
Additional Annual Subsidy—											
Statutes 1949, c. 1	1,100	—	—	—	—	—	—	—	—	—	1,100
Statutes 1942, c. 14	—	275	1,300	900	—	—	—	—	—	—	2,475
Statutes 1887, c. 8 and R.S. 1927, c. 12	—	20	—	—	—	—	—	—	—	—	20
Statutes 1912, c. 42	—	100	—	—	—	—	—	—	—	—	100
In lieu of public lands	—	6	—	—	—	—	562	750	750	100	2,168
In settlement of steamship services claims	—	30	—	—	—	—	—	—	—	—	30
In lieu of export duty on lumber	—	—	—	150	—	—	—	—	—	—	150
Totals	**1,569**	**657**	**2,057**	**1,679**	**3,301**	**3,641**	**1,755**	**2,041**	**2,127**	**1,281**	**20,108**

Taxation Agreements.—The Wartime Tax Agreements, 1942 are outlined in the 1946 Year Book, pp. 900-901. The 1947 and 1952 tax rental agreements are outlined in pp. 1087-1090 of the 1954 Year Book.

Subsection 5.—National Debt

A brief commentary dealing with the national debt of the Government of Canada from 1914 appears at p. 1091 of the 1954 Year Book. The tables which follow summarize the debt position as to interest, currency of payment, outstanding debt and securities issue.

26.—Summary of the Public Debt and Interest Payments thereon, Years Ended Mar. 31, 1944-54

NOTE.—Statistics for 1867-1913 are given in the 1942 Year Book, p. 775; those for 1914-35 in the 1947 edition, p. 972; and those for 1936-43 in the 1951 edition, p. 1009.

Year	Gross Debt	Net Active Assets	Net Debt	Net Debt Per Capita[1]	Increase or Decrease of Net Debt During Year	Interest Paid on Debt	Interest Paid Per Capita[2]
	$	$	$	$	$	$	$
1944...	12,359,123,230	3,619,038,337	8,740,084,893	731·63	2,557,235,792	242,681,180	20·57
1945...	15,712,181,527	4,413,819,509	11,298,362,018	935·91	2,558,277,125	318,994,821	26·70
1946...	18,959,846,183	5,538,440,734	13,421,405,449	1,091·88	2,123,043,431	409,134,502	33·89
1947...	17,698,195,740	4,650,439,192	13,047,756,548	1,039·58	−373,648,901	464,394,876[3]	37·78
1948...	17,197,348,981	4,825,712,088	12,371,636,893	964·80	−676,119,656	455,455,204	36·29
1949...	16,950,403,795	5,174,269,643	11,776,134,152	875·74	−595,502,741	465,137,958[3]	36·27
1950...	16,750,756,246	5,106,147,047	11,644,609,199	849·23	−131,524,953	439,816,335	32·71
1951...	16,923,307,028	5,489,992,080	11,433,314,948	816·14	−211,294,251	425,217,500	31·01
1952...	17,257,668,676	6,072,387,129	11,185,281,546	775·14	−248,033,402	432,423,082[4]	30·87
1953...	17,918,490,812[5]	6,756,756,543[5]	11,161,734,269	755·14	−23,547,277	451,339,521	31·28
1954...	17,923,189,502[5]	6,807,252,438[5]	11,115,937,064	731·55	−45,797,205	476,061,625	32·21

[1] Based on the official estimates of population for June 1 of the year indicated (*see* p. 137).

[2] Based on the official estimates of population for June 1 of the year immediately preceding the one indicated (*see* p. 137).

[3] The apparent increase in interest paid results from the accrued interest on refundable taxes having been charged in the year of repayment.

[4] Excludes $87,510,068 adjustment required to place interest on public debt on accrued basis.

[5] These figures are not strictly comparable with those for previous years, chiefly because of changed methods in accounting for cash.

Funded Debt Operations.—The funded debt and treasury bills outstanding as at Mar. 31, 1954, are listed in Table 27 and information on the Federal Government securities (payable in Canada) issued during the year ended Mar. 31, 1954, is given in Table 28.

27.—Unmatured Funded Debt and Treasury Bills as at Mar. 31, 1954, and Annual Interest Payable Thereon

Date of Maturity	Description	Rate	Where Payable	Amount of Loan Outstanding	Annual Interest Charge
		p.c.		$ cts.	$ cts.
1954—May 1	Six-Month Treasury Notes.........	2¼	Canada	200,000,000 00	4,500,000 00
July 1	Loan of 1953.........................	2	Canada	100,000,000 00	2,000,000 00
Sept. 1	Six-Month Treasury Notes.........	2	Canada	550,000,000 00	11,000,000 00
Dec. 15	Loan of 1950.........................	2	Canada	395,000,000 00	7,900,000 00
Dec. 15	Loan of 1952.........................	2	Canada	150,000,000 00	3,000,000 00

27.—Unmatured Funded Debt and Treasury Bills as at Mar. 31, 1954, and Annual Interest Payable Thereon—concluded

Date of Maturity	Description	Rate	Where Payable	Amount of Loan Outstanding	Annual Interest Charge
		p.c.		$ cts.	$ cts.
1955—July 1	Loan of 1953	2¼	Canada	200,000,000 00	4,500,000 00
July 1	Loan of 1953	2¼	Canada	400,000,000 00	9,000,000 00
1956—July 1	Loan of 1950	2¼	Canada	400,000,000 00	9,000,000 00
Nov. 1	Third Victory Loan, 1942	3	Canada	855,607,410 50[1]	25,414,081 50
Nov. 1	Canada Savings Bonds, 1946	2¾	Canada	95,935,500 00	2,638,226 25
1957—May 1	Fourth Victory Loan, 1943	3	Canada	1,111,261,650 00	33,337,849 50
Nov. 1	Canada Savings Bonds, 1947	2¾	Canada	50,870,500 00	1,398,938 75
1958—May 1	Loan of 1953	3	Canada	300,000,000 00	9,000,000 00
June 1	Loan of 1938–39	3	Canada	88,200,000 00	2,646,000 00
Nov. 1	Canada Savings Bonds, 1948	2¾	Canada	46,658,150 00	1,283,099 13
1959—Jan. 1	Fifth Victory Loan, 1943	3	Canada	1,197,324,750 00	35,919,742 50
Nov. 1	Canada Savings Bonds, 1949	2¾	Canada	68,392,650 00	1,880,797 87
1960—June 1	Sixth Victory Loan, 1944	3	Canada	1,165,300,350 00	34,959,010 50
Nov. 1	Canada Savings Bonds, 1950	2¾	Canada	63,646,500 00	1,750,278 75
1961—Jan. 15	Loan of 1936	3¼	New York	47,040,000 00	1,528,800 00
1962—Feb. 1	Seventh Victory Loan, 1944	3	Canada	1,315,639,200 00	39,469,176 00
Aug. 1	Canada Savings Bonds, 1951	3½	Canada	167,655,150 00	5,867,930 25
1963—July 1	Loan of 1933	3	London	49,120,039 78	1,473,601 20
July 1	Loan of 1938	3¼	London	1,950,100 06	63,378 24
Aug. 1	Canada Savings Bonds, 1952	3¾	Canada	200,436,800 00	7,516,380 00
Aug. 1	Loan of 1948	3	New York	147,000,000 00	4,410,000 00
Oct. 1	Eighth Victory Loan, 1945	3	Canada	1,295,819,350 00	38,874,580 50
1965—Nov. 1	Canada Savings Bonds, 1953	3¾	Canada	864,810,450 00	32,430,391 87
1966—June 1	Loan of 1936	3¼	Canada	54,703,000 00	1,777,847 50
Sept. 1	Ninth Victory Loan, 1945	3	Canada	1,691,796,700 00	50,753,901 00
1968—June 15	Loan of 1950	2½	Canada	350,000,000 00	9,625,000 00
1974—Sept. 1	Loan of 1949	2¾	New York	98,000,000 00[2]	2,695,000 00
1975—Sept. 15	Loan of 1950	2¾	New York	49,000,000 00[3]	1,347,500 00
1978—Jan. 15	Loan of 1953	3¾	Canada	100,000,000 00	3,750,000 00
Perpetual	Loan of 1936	3	Canada	55,000,000 00	1,650,000 00
Various	Treasury Bills	Various	Canada	650,000,000 00	12,974,100 00
Totals, Unmatured Funded Debt and Treasury Bills				**14,576,168,250 34**	**417,335,611 31**
Payable in Canada				14,184,058,110 50	405,817,331 87
Payable in New York				341,040,000 00	9,981,300 00
Payable in London (England)				51,070,139 84	1,536,979 44

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[1] Redeemable at 101 p.c. Amount outstanding includes $8,471,360.50 redemption bonus.

[2] Redeemable to Sept. 1, 1953, at 103 p.c.; thereafter to Sept. 1, 1957, at 102½ p.c.; to Sept. 1, 1961, at 102 p.c.; to Sept. 1, 1965, at 101½ p.c.; to Sept. 1, 1968, at 101 p.c.; to Sept. 1, 1971, at 100½ p.c.; and thereafter at 100 p.c.

[3] Redeemable to Sept. 15, 1954, at 103½ p.c.; thereafter to Sept. 15, 1957, at 103 p.c.; to Sept. 15, 1960, at 102½ p.c.; to Sept. 15, 1963, at 102 p.c.; to Sept. 15, 1966, at 101½ p.c.; to Sept. 15, 1969, at 101 p.c.; to Sept.15, 1972, at 100½ p.c.; and thereafter at 100 p.c.

28.—Federal Government New Security Issues during the Year Ended Mar. 31, 1954

(Payable in Canada)

Security Issues	Issue Date	Maturity Date	Interest Rate	Price to Government	Yield at Price to Government	Total Amount Issued	Renewals or Reconversion included in Amount Issued	Amount Issued for Cash
			p.c.	$	p.c.	$	$	$
Issued to Bank of Canada—								
Six-month treasury notes	May 1, 1953	Nov. 1, 1953	2	100·00	2·00	200,000,000	200,000,000	—
Six-month treasury notes	Sept. 1, 1953	Mar. 1, 1954	2¼	100·00	2·25	550,000,000	550,000,000	—
Six-month treasury notes	Nov. 1, 1953	May 1, 1954	2¼	100·00	2·25	200,000,000	200,000,000	—
Six-month treasury notes	Mar. 1, 1954	Sept. 1, 1954	2	100·00	2·00	550,000,000	550,000,000	—
Totals						**1,500,000,000**	**1,500,000,000**	—
Issued to General Public—								
One-year-eight-month loan	Nov. 1, 1953	July 1, 1955	2¼	98·00	3·49	400,000,000	400,000,000	—
Four-year-six-month loan	Nov. 1, 1953	May 1, 1958	3	97·15	3·69	300,000,000	300,000,000	—
Twenty-five-year loan	Jan. 15, 1953	Jan. 15, 1978	3¾	97·59	3·91	40,000,000	—	40,000,000
Canada Savings Bonds, Series VIII, Net	Nov. 1, 1953	Nov. 1, 1965	3¾	98·875	—	864,810,450	—	864,810,450
Increase in treasury bills	Various	Various	Various	Various	Various	50,000,000	—	50,000,000
Totals						**1,654,810,450**	**700,000,000**	**954,810,450**
Grand Totals						**3,154,810,450**	**2,200,000,000**	**954,810,450**

Guaranteed Debt.—Besides the direct debt of the Federal Government, already dealt with, there are large indirect obligations arising mainly out of the guarantee of securities, by the Federal Government, of the railway lines that now form the Canadian National Railways and the subsequent extensions thereof. Together with these are other small indirect obligations originating in the Government's guarantees of the bonds of the Canadian National Steamship services and of the bonds of the Harbour Commissions issued mainly for harbour improvements. Since 1932, guarantees of certain bank loans have been made under the various Relief Acts. When the Bank of Canada commenced business on Mar. 11, 1935, the guarantee [authorized by Sect. 27 (6) of the Bank of Canada Act] of the deposit required, to be maintained in the Bank of Canada by every chartered bank, came into force. This guarantee must be implemented "in the event of the property and assets of the Bank being insufficient to pay its liabilities and/or if the Bank suspends payment of any of its liabilities".

29.—Guaranteed Debt of the Government of Canada (Amounts held by the Public as at Mar. 31, 1954)

Note.—These contingent liabilities are expressed in Canadian dollars; stocks and bonds payable optionally or solely in Sterling or United States dollars are converted on the basis of £1=$4.86⅔ and $1 U.S.=$1 Canadian, respectively.

Item	Amount of Guarantee Authorized	Amount Held by Public at Mar. 31, 1954
	$	$
Railway Securities Guaranteed as to Principal and Interest—		
Canadian National Ry. Co. 4¾ p.c. gold bonds due 1955	50,000,000	48,496,000
Canadian National Ry. Co. 4½ p.c. gold bonds due 1956	70,000,000	67,368,000
Canadian National Ry. Co. 4½ p.c. gold bonds due 1957	65,000,000	64,136,000
Canadian Northern Ry. Co. 3½ p.c. debenture stock due 1958, £1,622,586/19/9	7,896,590	5,636,506
Canadian National Ry. Co. 3 p.c. bonds due 1959	35,000,000	35,000,000
Canadian Northern Alberta Ry. Co. 3½ p.c. debenture stock due 1960, £647,260/5/6	3,150,000	550,727
Canadian Northern Ontario Ry. Co. 3½ p.c. debenture stock due 1961, £7,350,000	35,770,000	3,597,518
Grand Trunk Pacific Ry. Co. 3 p.c. bonds due 1962, £14,000,000	68,040,000	26,465,130
Canadian Northern Alberta Ry. Co. 3½ p.c. debenture stock due 1962, £733,561/12/10	3,570,000	—
Grand Trunk Pacific Ry. Co. 4 p.c. bonds due 1962, £3,280,000	15,940,800	7,999,074
Canadian National Ry. Co. 3 p.c. bonds due 1966	35,000,000	35,000,000
Canadian National Ry. Co. 2¾ p.c. bonds due 1967	50,000,000	50,000,000
Canadian National Ry. Co. 2⅞ p.c. bonds due 1969	70,000,000	70,000,000
Canadian National Ry. Co. 2⅞ p.c. bonds due 1971	40,000,000	40,000,000
Canadian National Ry. Co. 3¾ p.c. bonds due 1974	200,000,000	200,000,000
Canadian National Ry. Co. 2¾ p.c. bonds due 1975	6,000,000	6,000,000
Totals	**755,367,390**	**660,248,955**
Railway Securities Guaranteed as to Interest Only—		
Grand Trunk Ry. Acquisition Guarantees—		
Grand Trunk 5 p.c. perpetual debenture stock, £4,270,375	20,782,492	173,871
Great Western 5 p.c. perpetual debenture stock, £2,723,080	13,252,323	61,855
Grand Trunk 4 p.c. perpetual debenture stock, £24,624,455	119,839,014	952,353
Northern Ry. Co. of Canada 4 p.c. perpetual debenture stock, £308,215	1,499,980	5,334
Totals	**155,373,809**	**1,193,413**
Other Securities Guaranteed as to Principal and Interest—		
Canadian National (West Indies) Steamships Ltd., 5 p.c. bonds due 1955	10,000,000	9,400,000
Saint John Harbour Commissioners bonded indebtedness of the City of Saint John assumed by Commission	1,467,165	3,329
Totals	**11,467,165**	**9,403,329**
Other Guarantees—		
Bank advances, *re* Province of Manitoba Savings Office	12,442,400[1]	2,540,078
Province of Manitoba Treasury Bill	2,500,000	1,000,000
Deposits maintained by the chartered banks in Bank of Canada	Unstated	660,006,115
Loans made by approved lending institutions under National Housing Act.	Unstated	Indeterminate
Loans made by approved lending institutions under The Home Improvement Loans Guarantee Act	7,500,000[1]	257
Loans made by approved lending institutions under Part IV of the National Housing Act, 1944, for home extensions or improvements	6,250,000	7,483
Guarantees to approved lending institutions in respect of land assembly projects under the National Housing Act, 1944	Unstated	543,535
Guarantees under Export Credits Insurance Act	12,750,000	8,925,000
Loans made by chartered banks under the Farm Improvement Loans Act.	58,952,089	31,762,495
Loans made by chartered banks under the Veterans Business and Professional Loans Act	Indeterminate	1,866,602
Loans made by chartered banks under The Prairie Grain Producers' Interim Financing Act, 1951 (as at Feb. 28, 1954)	5,000,000	25,778
Loans made by chartered banks to the Canadian Wheat Board	150,000,000	73,626,838

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[1] This amount represents the original maximum amount guaranteed. As the authority for making additional guaranteed loans or advances had expired prior to Mar. 31, 1953, the amount authorized at that date is the same as the amount outstanding.

Section 3.—Provincial Public Finance

To prepare comparable provincial finance statistics it is essential that data be presented, to the greatest possible extent, in uniform categories. Activities relating to a specific function are sometimes excluded by provincial governments from their ordinary account. The special or administrative funds of this nature so excluded are, therefore, added to provincial ordinary account and capital account to arrive at revenue and expenditure in the tables of this Section. The figures of revenue and expenditure presented will, therefore, differ considerably from the totals shown in certain provincial public accounts.

Fiscal periods are dealt with to coincide as nearly as possible in view of the variations in provincial fiscal year-ends. Figures for the Province of Newfoundland are included commencing with the year 1949 and those for Yukon Territory with the year 1950.

Subsection 1.—Revenue and Expenditure of Provincial Governments

The figures of revenue and expenditure presented in this Subsection do not agree with those shown in Tables **1** and **3**, pp. 1126 and 1127-1128, mainly because of differences in the methods used to compute "net" figures.

The classification of revenue by source and of expenditure by function was revised in 1946 and again in 1948. Details of these changes may be found in the 1951 Year Book, p. 1014, and in the 1952-53 Year Book, p. 1064.

"Net general revenue" (*see* Tables **30** and **31**) is the deduction from "gross general revenue" of (a) all institutional revenue, (b) revenue in the form of interest, premium, discount and exchange, (c) grants-in-aid and shared-cost contributions, and (d) all capital revenue. These revenues are then offset against the related functions of expenditure to arrive at "Net general expenditure", as shown in Tables **30** and **32**.

The following statement gives some indication of the increase in the revenue collected and services rendered in 1951 by the provincial governments compared with 1946.

Item	*1946* [1]	*1951* [1]	*Increase*
	(*Millions of Dollars*)		
NET GENERAL REVENUE—			
Taxes—			
Corporation income tax	1	163	162
Motor fuel and fuel oil tax	73	180	109
General sales tax	25	88	63
Other taxes	73	130	57
Federal tax-rental agreements	84	88	4
Privileges, Licences and Permits—			
Motor-vehicles	38	72	34
Natural resources	42	113	71
Other	24	42	18
Liquor profits	100	113	13
Other revenue and non-revenue and surplus receipts	42	61	19
TOTALS, NET GENERAL REVENUE	502	1,050	550
NET GENERAL EXPENDITURE—			
Transportation and communications	135	293	158
Health and Social Welfare	101	253	152
Education	88	191	103
Debt charges	73	144	71
Other	112	248	136
TOTALS, NET GENERAL EXPENDITURE	509	1,129	620

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[1] Figures exclude Newfoundland and Yukon Territory.

30.—Net General Revenue and Expenditure of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1949-51

Province or Territory	Revenue			Expenditure		
	1949	1950	1951	1949	1950	1951
	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	17,424	21,028	25,183	26,077	27,536	29,995
Prince Edward Island	5,091	5,590	6,048	6,743	7,537	8,368
Nova Scotia	34,249	35,685	38,794	52,703	53,988	51,855
New Brunswick	29,431	32,271	40,697	40,037	43,463	44,624
Quebec	207,040	238,883	277,406	197,651	233,986	275,500
Ontario	235,421	265,705	303,842	280,550	298,779	367,726
Manitoba	38,042	41,643	46,073	38,831	40,912	48,717
Saskatchewan	61,275	66,668	74,777	60,446	68,168	77,449
Alberta	88,363	105,276	105,751	58,729	73,702	84,840
British Columbia	124,265	138,681	157,102	163,267	160,169	170,136
Yukon Territory	..	1,023	1,187	..	1,001	1,163
Totals	**840,601**	**952,453**	**1,076,860**	**925,034**	**1,009,241**	**1,160,373**

31.—Details of Net General Revenue of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1950 and 1951

Source	1950	1951
	$'000	$'000
Taxes—		
Corporations	23,022	25,464
Income—		
Corporations	127,217	163,006
Individuals	115	65
Property	7,299	7,834
Sales—		
Alcoholic beverages	1,608	1,615
Amusements and admissions	19,007	19,975
Motor-fuel and fuel-oil	156,587	181,949
Tobacco	10,003	9,830
General	75,845	90,675
Other commodities and services	3,295	4,162
Succession duties	31,216	34,189
Other	23,294	27,616
Totals, Taxes	478,508	566,380
Federal Tax-Rental Agreements	92,782	95,887
Privileges, Licences and Permits—		
Liquor control and regulation	26,907	28,370
Motor-vehicles	67,060	72,645
Natural resources	99,325	113,307
Other	13,418	13,953
Totals, Privileges, Licences and Permits	206,710	228,275
Sales and Services	23,387	29,925
Fines and Penalties	2,439	2,916

Source	1950	1951
	$'000	$'000
Other Governments—		
Government of Canada—		
Share of income tax on power utilities	4,458	3,714
Subsidies	25,300	26,615
Totals, Government of Canada	29,758	30,329
Municipalities	851	879
Totals, Other Governments	30,609	31,208
Government Enterprises and Other Funds—		
Liquor profits	111,939	115,640
Other	3,486	3,459
Other revenue	700	776
Totals, excluding Non-revenue and Surplus Receipts	950,560	1,074,466
Non-revenue and Surplus Receipts—		
Refund of previous years' expenditure	717	859
Repayment of advances credited to revenue	1,152	1,524
Other	24	11
Totals, Non-revenue and Surplus Receipts	1,893	2,394
Totals, Net General Revenue	**952,453**	**1,076,860**

32.—Details of Net General Expenditure of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1950 and 1951

Function	1950	1951
	$'000	$'000
General Government—		
Executive and administrative	33,191	38,533
Legislative	3,518	6,468
Research, planning and statistics	333	371
Other	—	9
Totals, General Government	37,042	45,381
Protection of Persons and Property—		
Law enforcement	11,276	14,298
Corrections	11,687	14,164
Police protection	13,904	13,786
Other	13,916	18,289
Totals, Protection of Persons and Property	50,783	60,537
Recreational and cultural services	5,768	6,890
Education—		
Schools operated by local authorities	131,068	143,147
Universities, colleges and other schools	38,165	37,028
Education of the handicapped	1,485	1,553
Superannuation and pensions	6,173	8,009
Other	6,224	6,744
Totals, Education	183,115	196,481
Natural Resources and Primary Industries—		
Fish and game	8,161	8,904
Forests	22,399	27,645
Lands: settlement and agriculture	34,339	38,793
Minerals and mines	4,154	5,215
Other	2,881	4,553
Totals, Natural Resources and Primary Industries	71,934	85,110
Transportation and Communications—		
Airways	—	4
Highways, roads and bridges	246,483	296,115
Railways	353	370
Telephone, telegraph and wireless	30	23
Waterways	3,086	2,957
Other	6	5
Totals, Transportation and Communications	249,958	299,474

Function	1950	1951
	$'000	$'000
Health and Social Welfare—		
Health—		
General	3,049	3,709
Public health	10,286	11,290
Medical, dental and allied services	6,306	7,049
Hospital care	138,501	151,935
Totals, Health	158,142	173,983
Social Welfare—		
Aid to aged persons	43,302	39,620
Aid to blind persons	1,598	1,357
Aid to unemployed employables and unemployables	13,226	14,391
Mothers' allowances	17,938	18,679
Child welfare	4,412	7,678
Labour	2,253	2,694
Other	4,140	7,855
Totals, Social Welfare	86,869	92,274
Totals, Health and Social Welfare	245,011	266,257
Trade and Industrial Development	5,667	6,660
Local Government Planning and Development	1,500	1,973
Debt Charges[1]	119,502	143,243
Contributions to Other Governments—		
Shared-revenue contributions	12,788	18,470
Subsidies	3,807	4,143
Other	—	13
Totals, Contributions to Other Governments	16,595	22,626
Contributions to Government Enterprises and Other Funds	11,754	14,592
Other Expenditure	8,110	8,960
Totals, excluding Non-expense and Surplus Payments	1,006,739	1,158,184
Non-expense and Surplus Payments—		
Advance charged to revenue	125	316
Refunds of previous years' revenue	378	290
Other	1,999	1,583
Totals, Non-expense and Surplus Payments	2,502	2,189
Totals, Net General Expenditure	**1,009,241**	**1,160,373**

[1] Includes debt retirement amounting to $66,937,000 in 1950.

33.—Gross Ordinary Revenue and Expenditure of Provincial Governments, Fiscal Years Ended Nearest Dec. 31, 1949-51

Province or Territory	Revenue			Expenditure		
	1949	1950	1951	1949	1950	1951
	$'000	$'000	$'000	$'000	$'000	$'000
Newfoundland	19,944	27,744	30,359	24,542	28,099	30,038
Prince Edward Island	6,375	7,007	7,327	6,418	6,993	7,153
Nova Scotia	44,426	46,540	49,336	44,301	47,496	49,910
New Brunswick	36,885	40,283	48,769	36,997	40,892	50,102
Quebec	244,514	283,846	318,821	212,605	245,853	256,911
Ontario	280,914	313,336	348,506	291,425	310,155	364,064
Manitoba	48,663	65,327	57,067	43,340	61,706	53,628
Saskatchewan	72,690	79,192	85,804	67,961	74,819	79,081
Alberta	98,626	118,088	118,341	52,105	61,166	70,582
British Columbia	145,090	156,586	175,387	156,120	162,792	170,282
Yukon Territory	..	1,077	1,532	..	900	1,140
Totals	**998,127**	**1,139,026**	**1,241,249**	**935,814**	**1,040,871**	**1,132,891**

Subsection 2.—Debt of Provincial Governments

The average coupon rate of gross bonded debt of Provincial Governments in 1952 remained at the 1951 level of 3·47 p.c.

Tables **34** to **36** deal with the direct and indirect debt of the Provincial Governments and reveal that though total gross bonded debt has steadily increased in the past five years, the average coupon rate has decreased slightly. Table **34** reflects the preponderance of bond issues payable in Canada only. There has been a steady decline in bonded debt payable in London (England).

34.—Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments, as at Fiscal Year Ends Nearest Dec. 31, 1948-52

Year	Bonded Debt	Average Coupon Rate	Average Term of Issue	Bonded Debt	Average Coupon Rate	Average Term of Issue
				Newfoundland		
				$'000	p.c.	yrs.
1949				6,223	3·34	22·3
1950				6,223	3·34	22·3
1951				5,000	3·30	18·0
1952				15,000	4·27	14·0
	Prince Edward Island			Nova Scotia		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1948	13,873	3·18	12·0	124,470	3·42	17·0
1949	15,402	3·13	12·3	141,098	3·38	16·5
1950	15,666	3·09	12·5	156,632	3·29	16·8
1951	17,500	3·22	12·3	172,291	3·33	16·8
1952	18,998	3·30	12·5	190,871	3·35	17·0
	New Brunswick			Quebec		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1948	137,967	3·55	18·2	437,900	3·36	17·2
1949	158,654	3·51	17·3	419,450	3·43	17·4
1950	165,842[1]	3·48	17·3	420,085[1]	3·39	17·7
1951	188,868[1]	3·59	17·0	435,885[1]	3·33	18·0
1952	198,366[1]	3·71	17·4	461,510[1]	3·22	17·0

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[1] Excludes bonds assumed by the province.

34.—Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments, as at Fiscal Year Ends Nearest Dec. 31, 1948-52—concluded

Year	Bonded Debt	Average Coupon Rate	Average Term of Issue	Bonded Debt	Average Coupon Rate	Average Term of Issue
	Ontario			Manitoba		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1948	583,349	3·64	21·2	74,686	4·07	23·3
1949	654,503	3·56	21·2	91,480	3·82	21·5
1950	672,667[1]	3·52	21·9	98,446	3·68	19·6
1951	794,499[1]	3·54	21·1	128,409	3·66	18·8
1952	867,567[1]	3·53	22·4	154,149	3·74	18·2
	Saskatchewan			Alberta		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1948	142,460	4·20	19·4	108,289	3·37	22·3
1949	130,822	4·16	19·6	168,700	3·16	20·5
1950	134,594	4·02	19·5	88,765	2·86	15·0
1951	135,331	3·87	18·8	86,270	2·87	15·2
1952	145,351	3·88	19·8	83,693	2·87	15·5
	British Columbia			Totals		
	$'000	p.c.	yrs.	$'000	p.c.	yrs.
1948	143,984	3·69	21·7	1,766,978	3·61	19·8
1949	168,763	3·55	21·2	1,955,095	3·53	19·5
1950	185,820	3·36	20·0	1,944,740[1]	3·46	19·3
1951	245,266	3·38	20·1	2,209,319[1]	3·47	19·1
1952	235,528	3·41	20·7	2,371,033[1]	3·47	19·5

[1] Excludes bonds assumed by the province.

35.—Total Gross Bonded Debt (exclusive of Treasury Bills) of Provincial Governments by Currency of Payments, as at Fiscal Year Ends Nearest Dec. 31, 1948-52

Payable in—	1948	1949	1950	1951	1952
	$'000	$'000	$'000	$'000	$'000
Canada only	1,210,291	1,361,933	1,421,651	1,450,160	1,522,623
London (England) only	29,958	28,670	19,359	16,643	16,643
London and Canada	8,721	7,582	2,974	3,499	3,499
New York (U.S.A.) only	—	—	16,875	265,025	358,255
New York and Canada	301,787	346,182	300,867	296,047	297,243
London, New York, and Canada	216,221	210,728	183,014	177,945	172,770
Totals	**1,766,978**	**1,955,095**	**1,944,740**[1]	**2,209,319**[1]	**2,371,033**[1]

[1] Excludes bonds assumed by the Provinces of New Brunswick, Quebec and Ontario.

36.—Provincial Government Net Direct and Indirect Debt (less Sinking Funds), as at Mar. 31, 1953

Direct and Indirect Debt	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Direct Debt											
Funded Debt—											
Bonded debt	15,000	18,998[1]	190,871	198,816[2]	461,925[2]	868,467[2]	154,149	145,351	83,693	235,528	2,372,798
Less Sinking Funds	1,374	2,764	18,475	34,146	106,607	155,985	32,894	12,765	—	58,244	423,254
Net bonded debt	13,626	16,234	172,396	164,670	355,318	712,482	121,255	132,586	83,693	177,284	1,949,544
Treasury bills[3]	—	—	—	—	—	—	16,758	29,166	11,108	21,581	78,613
Net Funded Debt	13,626	16,234	172,396	164,670	355,318	712,482	138,013	161,752	94,801	198,865	2,028,157
Short-term treasury bills[4]	—	—	1,200	—	—	25,500[5]	10,935[6]	5,218	—	—	42,853
Savings deposits and certificates	12	1,103[7]	—	—	—	—	—	31	328	—	1,474
Temporary loans and overdrafts	—	—	—	—	—	9,311	—	—	—	—	9,311
Accounts and Other payables—											
Trust funds and other deposits	—	25	3,894	343	9,787	29,477	2,499	2,803	—	10,952	59,780
Other[8]	862	44	1,793	2,855	16,935	61,271[9]	63	2,700	5,764	20,763	113,050
Accrued interest and other accrued expenditure	206	168	1,834	2,813	3,779	9,943	3,352	1,328	222	2,372	26,017
Totals, Net Direct Debt (less Sinking Funds)	**14,706**	**17,574**	**181,117**	**170,681**	**385,819**	**847,984**	**154,862**	**173,832**	**101,115**	**232,952**	**2,280,642**
Indirect Debt											
Guaranteed bonds or debentures	5,160	387	757	8,065	286,612	715,604	325	256	2	31,939	1,049,107
Less sinking funds	—	—	121	254	245	2,190[10]	—	243	—	2,248	5,301
Guaranteed bank loans	2,356	—	2,867	2,455	2,200	3,720	—	282	4,678	—	18,558
Municipal improvement assistance act loans	—	4	415	243	1,261	—	68	368	336	987	3,682
Other guarantees	26,036[11]	—	—	—	—	—	—	42	—	—	26,078
Totals, Net Indirect Debt (less Sinking Funds)	**33,552**	**391**	**3,918**	**10,509**	**289,828**	**717,134**	**393**	**705**	**5,016**	**30,678**	**1,092,124**
Totals, Net Direct and Indirect Debt (less Sinking Funds)	**48,258**	**17,965**	**185,035**	**181,190**	**675,647**	**1,565,118**	**155,255**	**174,537**	**106,131**	**263,630**	**3,372,766**
Net direct debt per capita[12]	38·40	165·79	273·18	318·43	90·38	173·16	191·42	201·90	100·91	189·39	154·56
Net indirect debt per capita[12]	87·60	3·69	5·91	19·61	67·89	146·44	0·49	0·82	5·01	24·94	74·01

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[1] Includes $50,000 bonds issued by the Provincial Sanatorium Commission. [2] Includes bonds assumed: N.B., $450,000; Que., $415,000; Ont., $900,000. [3] Having a term of two or more years. [4] Having a term of less than two years. [5] Includes $15,000,000 treasury bills issued by the Ontario Municipal Improvement Corporation. [6] Net after deducting sinking fund of $52,000. [7] Includes trust deposits not separable from personal savings deposits. [8] Includes bonds (or debentures) due and bond (or debenture) interest due, previously reported separately. [9] Includes $61,096,000 net liability of the province *re* Province of Ontario Savings Office. [10] Includes $2,174,000 sinking funds held by the Hydro Electric Power Commission. [11] Deposits in the Newfoundland Savings Bank. [12] Based on population estimated as at June 1, 1953 (*see* p. 137).

Section 4.—Municipal Finance

Subsection 1.—Municipal Assessed Valuations

The revenue resources of municipalities are limited, generally, to direct taxation based on assessed valuations of real and other types of property. In the Provinces of Prince Edward Island, Nova Scotia, New Brunswick, Manitoba and Alberta, municipalities assess and tax personal property. In Alberta municipal districts, the valuations of personal property assessed have risen sharply with the growth of the oil industry. In Manitoba, the personal property tax is used generally by all classes of municipalities except cities. Aside from property, the most important type of valuation for taxation purposes is business assessment, although not all provinces assess for business purposes separately and distinctly from real property valuations. A variation of methods, schedules and rates exists not only between provinces but also between municipalities within the same province. Some municipalities use the rental basis, others the value of floor space occupied and still others the capital value of the premises occupied. Three provinces have other miscellaneous types of assessment, the general nature of which are given in the footnotes to Table **37**.

The figures in Table **37** are not entirely comparable, on an interprovincial basis, from the standpoint of relative values of properties taxable for municipal purposes. Each province operates under its own assessment laws, which are not all similar either in application or in effect. For instance, in British Columbia cities and municipal districts, improvements cannot be taxed on a value in excess of 75 p.c. of taxable values or, in most of the villages, in excess of 50 p.c. of taxable values; the values actually taxed in 1952 ranged from nil to 75 p.c. Improvements were assessed generally for tax purposes at 50 p.c. of taxable values, but for all municipalities the total improvements actually taxed represented 52·6 p.c. of total taxable values. In addition, there are other intra-provincial inconsistencies between municipalities which, in turn, further affect interprovincial comparisons. These may be said to be caused by the lack of integrated municipal assessment systems and uniform standards for establishing values on a province-wide basis, under the direction and control of a central authority. However, there has been considerable progress towards uniformity and improved procedure in recent years.

Complete figures for tax-exempt properties are not available for each province, but the information given shows that these properties have assumed relatively high proportions. Most provinces have shown consistent increases in taxable assessed valuations that may be attributed largely to the war-born stimulus to business and industry and the continued buoyancy of the economy in the post-war years.

37.—Municipal Assessed Valuations, by Province, 1948-52

Province and Year	Taxable Valuations on which Taxes were Levied					Total Exemptions[2]
	Real Property	Personal Property	Business	Other[1]	Total	
	$	$	$	$	$	$
N'f'ld.—[3]						
1952..........	..	..	..	..	..	..
P. E. I.—[4]						
1948..........	12,272,825	5,353,199	..	..	17,626,024	7,456,500
1949..........	13,714,935	5,777,847	..	..	19,492,782	7,456,500
1950..........	16,872,045	6,085,510	..	..	22,957,555	7,788,500
1951..........	23,539,274	9,650,989	..	..	33,190,263	9,585,500
1952..........	25,767,825	9,822,300	..	..	35,590,125	9,595,500

For footnotes, *see* end of table.

37.—Municipal Assessed Valuations, by Province, 1948-52—concluded

Province and Year	Taxable Valuations on which Taxes were Levied					Total Exemptions[2]
	Real Property	Personal Property	Business	Other[1]	Total	
	$	$	$	$	$	$
N. S.—						
1948	172,646,093	32,901,111	10,866,035	3,934,300	220,347,539	98,190,291
1949	179,425,853	35,658,983	11,826,635	4,039,860	230,951,331	96,594,851
1950	186,588,461	36,277,551	12,527,060	4,212,700	239,605,772	100,567,331
1951	223,083,830	49,077,698	13,704,315	4,582,280	290,448,123	121,862,179
1952	240,575,423	55,167,734	14,315,320	4,745,615	314,804,092	135,475,897
N.B.—						
1948	216,747,760	39,148,968	24,838,762[5]	...	280,735,490	..
1949	232,968.026	49,867,238	20,242,638	4,548,246	307,626,148	..
1950	248,004,509	52,053,312	20,005,507	5,049,356	325,112,684	..
1951	277,823,120[6]	57,940,014	20,084,431	5,549,813	361,397,378	..
1952	304,672,416[6]	66,139,670	18,448,868	7,792,704	397,053,658	..
Que.—						
1948	..	...	..	—	2,870,933,000	844,926,000
1949	..	...	..	—	..	..
1950	..	...	..	—	3,250,913,000	956,491,000
1951	3,667,164,730	...	..	—	3,667,164,730	1,020,186,968
1952	3,868,454,172	...	..	—	3,868,454,172	1,110,220,252
Ont.—						
1948	3,097,590,198	...	337,253,277	—	3,434,843,475	672,486,650
1949	3,541,093,264	...	439,425,168	—	3,980,518,432	690,345,875
1950	3,724,238,000	...	475,081,000	—	4,199,319,000	813,812,000
1951	3,883,874,441	...	526,167,093	—	4,410,041,534	873,847,077
1952	4,253,111,819	...	520,867,384	—	4,773,979,203	913,310,338
Man.—						
1948	497,463,070	6,444,105	18,689,579	—	522,596,754	145,537,582
1949	545,455.305	6,765,685	20,686,352	—	572,907,342	150,227,268
1950	567,470.959	6,866,910	23,655,349	—	597,993,218	150,610,692
1951	588,596,298	6,841,122	25.064,239	—	620,501,659	156,258,385
1952	615,894,060	6,513,999	27,614,244	—	650,022,303	154,354,005
Sask.—						
1948	856,567,899	...	45,138,084	224,200	901,930,183	126,093,885
1949	851,346,814	...	45,358,694	74,830	896,780,338	125,049,181
1950	866.976,708	...	45,874,623	72,780	912,924,111	129,356,385
1951	881,911,929	...	46,341,360	61,320	928,314,609	477,649,877
1952	894,296,222	...	46,957,456	27,100	941,280,778	491,314,850
Alta.—						
1948	643,444,139	32,058,972	16,859,447	—	692,362,558	71,396,730
1949	689,096,752	41,259,257	19,690.072	—	750,046,081	76,510,667
1950	736.603,247	39,823,230	24,392.850	—	800,819,327	88,450,368
1951	803,411,739	47,376.105	29,033,624	—	879,821,468	91,290,874
1952	895,586,606	58,114,430	33,790,852	—	987,491,888	106,461,418
B.C.—						
1948	528,714,750	...	..	—	528,714.750	199,388,993
1949	573,460,256	...	..	—	573,460,256	206,974,496
1950	622,441,721	...	..	—	622,441,721	226,258,620
1951	658,828,264	...	..	—	658,828.264	249,473,826
1952	712,927,512	...	..	—	712,927,512	266,362,640

[1] Includes the following: N.S.—household tax, Halifax; N.B.—occupancy tax, Fredericton, and rentals tax, Moncton; Sask.—special franchise. [2] Total of valuations assessed but exempted from taxation. Excludes exempt property not assessed. [3] Taxes are levied on rental values in some municipalities using a property base. [4] Includes estimated values for some municipalities; total exemptions are incomplete. [5] Includes some other types of valuations not specified. [6] Includes personal property tax for local improvement districts and commissions, not separable.

Subsection 2.—Municipal Taxation

Table 38 shows, by province, the local taxes levied by municipalities and by some school authorities in the years 1948-52 and the total taxes outstanding at the end of those years.

38.—Municipal Taxation, by Province, 1948-52

Province and Year	Tax Levy	Tax Collections, Current and Arrears		Taxes Receivable, Current and Arrears	Property Acquired for Taxes	Total Taxes Receivable and Property Acquired for Taxes	
		Total	P.C. of Levy			Total	P.C. of Levy
	$	$		$	$	$	
Newfoundland—							
1949	931,215	845,334	90·8	265,703	...	265,703	28·5
1950	1,030,979	969,971	94·1	353,138	...	353,138	34·3
1951	1,453,917	1,347,540	92·7	404,946	...	404,946	27·9
1952	1,767,602	1,630,887	92·3	515,489	...	515,489	29·2
P. E. Island—							
1948	833,366	833,575	100·0	222,960	..	222,960	26·8
1949	777,767	761,625	97·9	225,577	..	225,577	29·0
1950	864,602	822,688	95·2	244,482	..	244,482	28·3
1951	1,073,484	997,612	92·9	288,833	..	288,833	26·9
1952	1,348,642	1,238,427	91·8	351,642	..	351,642	26·1
Nova Scotia—							
1948	12,707,972	12,342,248	97·1	3,806,377	195,841	4,002,218	31·5
1949	13,610,727	13,199,199	96·9	4,038,184	179,418	4,217,602	31·0
1950	14,320,422	13,946,136	97·4	4,203,943	1,007,109	5,211,052	36·4
1951	16,531,193	15,899,368	96·2	4,702,645	175,781	4,878,426	29·5
1952	19,250,594	18,837,622	97·9	4,917,966	169,157	5,087,123	26·4
New Brunswick—							
1948	9,141,136	8,426,173	92·2	2,792,139	88,474	2,880,613	31·5
1949	11,116,471	10,201,899	91·8	3,544,853	80,629	3,625,482	32·6
1950	12,294,380	11,178,375	91·0	4,356,118	183,070	4,539,188	36·9
1951	12,579,650	12,116,729	96·3	4,207,475	89,148	4,296,623	34·2
1952	15,181,021	14,143,016	93·2	4,416,044	74,435	4,490,479	29·6
Quebec—							
1950[1]	80,204,341	..	..	18,549,933	4,205,544	22,755,477	28·4
1951	143,689,638	..	..	23,091,184	3,554,166	26,645,350	18·5
1952	159,005,705	..	..	20,976,477	2,806,924	23,783,401	15·0
Ontario—							
1948	150,141,445	149,383,137	99·5	12,765,099	6,163,786	18,928,885	12·7
1949	170,378,640	167,154,308	98·1	16,223,329	5,385,640	21,608,969	12·7
1950	188,959,809	187,672,943	99·3	17,707,760	4,801,022	22,508,782	11·9
1951	228,919,382	221,230,840	96·6	21,948,812	4,678,915	26,627,727	11·6
1952	263,196,643	259,438,790	98·6	24,764,795	4,459,226	29,224,021	11·1
Manitoba—							
1948	27,154,286	26,210,912	96·5	4,447,077	4,549,261	8,996,338	33·1
1949	30,423,998	29,223,263	96·1	5,528,560	4,266,927	9,795,487	32·2
1950	32,658,247	30,416,670	93·1	6,977,569	3,769,230	10,746,799	33·0
1951	36,415,815	34,735,950	95·4	7,995,116	3,584,765	11,579,881	31·8
1952	39,280,255	37,398,604	95·2	8,908,189	3,247,678	12,155,867	30·9
Saskatchewan—[2]							
1948	30,768,101	29,961,977	97·4	10,714,649	10,298,050	21,012,699	68·3
1949	34,202,279	32,030,434	93·7	11,411,352	9,724,520	21,135,872	61·8
1950	36,215,067	33,241,810	91·8	13,002,572	9,111,191	22,113,763	61·1
1951	39,591,746	37,655,710	95·1	12,937,436	8,497,767	21,435,203	54·1
1952	43,067,367	43,218,103	100·3	11,369,397	7,565,541	18,934,938	41·0
Alberta—							
1948	33,223,845	33,625,854	101·2	8,369,719	12,150,325	20,520,044	61·8
1949	38,343,373	37,572,671	98·0	9,672,256	11,028,278	20,700,534	54·0
1950	42,251,428	39,648,740	93·8	11,445,409	10,772,481	22,217,890	52·6
1951	46,065,178	44,066,024	95·7	13,022,860	10,356,788	23,379,648	50·8
1952	53,079,124	52,560,222	99·0	13,193,743	9,756,823	22,950,566	43·2

For footnotes, *see* end of table.

38.—Municipal Taxation, by Province, 1948-52—concluded

Province and Year	Tax Levy	Tax Collections, Current and Arrears		Taxes Receivable, Current and Arrears	Property Acquired for Taxes	Total Taxes Receivable and Property Acquired for Taxes	
		Total	P.C. of Levy			Total	P.C. of Levy
	$	$		$	$	$	
British Columbia—							
1948	31,569,359	32,129,247	101·8	2,547,197	6,627,977	9,175,174	29·1
1949	35,935,608	35,292,415	98·2	3,024,234	6,160,178	9,184,412	25·6
1950	38,958,707	38,941,143	100·0	3,135,089	6,003,092	9,138,181	23·5
1951	43,190,910	42,746,414	99·0	3,616,090	5,679,215	9,295,305	21·5
1952	48,577,199	48,396,892	99·6	3,883,621	5,314,659	9,198,280	18·9

[1] Does not include schools; information not available. [2] Excludes certain provincial and other special taxes (*see* text following this table).

Because of the considerable differences in the division of responsibility for services between the provincial governments and their respective municipalities, extreme caution should be exercised in using the figures in Table **38** as a basis for interprovincial comparisons of the relative burden of municipal taxation. Also, in Saskatchewan, municipalities are required to levy certain taxes for and on behalf of the provincial government and for other special purposes for which there is no comparable situation in other provinces. For Saskatchewan, the amounts of such taxes excluded in the municipal levies in Table **38** are as follows:—

Province and Tax	*1948*	*1949*	*1950*	*1951*	*1952*
	$	$	$	$	$
SASKATCHEWAN—					
Public revenue	1,719,041	1,751,388	1,809,703	1,830,314	1,845,949
Hail	1,433,916	1,092,058	1,217,658	1,111,465	2,069,074
Telephone	633,287	678,358	718,987	760,610	814,269
Drainage	16,060	14,762	13,101	13,157	11,813
TOTALS, SASKATCHEWAN	3,802,304	3,536,566	3,759,449	3,715,546	4,741,105

Subsection 3.—Municipal Debt

The rapid growth experienced by municipalities in Canada, coupled with increased demands and responsibilities for improvements, schools, utilities and other services or facilities, has resulted in the incurring of a heavy burden of debt. Debenture borrowings increased rapidly in the period 1900-12 and again during the 1920's and early 1930's. From 1933 to 1946 the trend was downward but since 1947 it has shown a considerable increase.

Several important factors contributed to the 1933-46 decline—not least important the measure of control exercised by the provincial governments over capital expenditure involving the incurring of debt. In addition, there was a more or less orderly retrenchment during the depression years following periods of what proved to be unwarranted expansion which, along with widespread demands to ease the tax burden on real property, resulted in the severe curtailment of capital undertakings and works requiring debenture financing. Also, the greater part of the municipal long-term debt was represented by serial or instalment-type debentures, which require yearly repayments of principal. During the 1930's, the rehabilitation of existing assets and new works and improvements necessitated by normal expansion and development were sacrificed mainly in the interests of the taxpayers. After the outbreak of war in 1939, the policy of deferment was continued, or even extended, to free the financial market for the needs of the Federal Government in meeting war-financing requirements. Since the end of the War, however, municipalities have resumed their improvement programs and thus have increased their debenture debts. Table **39** shows figures of municipal indebtedness for 1951 and 1952 and includes temporary loans and other liabilities in addition to debenture debt.

39.—Debt of Municipal and School Corporations, by Province, for their Fiscal Years Ended in 1952, and Totals for 1951 and 1952

NOTE.—Figures shown are compiled from published reports of provincial Departments of Municipal Affairs, auditors reports and financial statements of municipalities, and information secured from other official sources.

Direct and Indirect Debt	New-foundland	Prince Edward Island	Nova Scotia	New Brunswick
	$	$	$	$
Direct Debt—				
Debenture debt	4,135,897	4,249,944	51,974,493	52,396,973
Less Sinking Funds	228,119	1,056,681	11,403,101	7,522,094
Net Debenture Debt	3,907,778	3,193,263	40,571,392	44,874,879
Temporary loans and bank overdrafts	33,582	744,098	8,293,057	2,999,506
Accounts payable and other liabilities	566,299	34,177	3,567,650	2,652,580
Totals, Direct Liabilities (less Sinking Funds)	**4,507,659**	**3,971,538**	**52,432,099**	**50,526,965**
Indirect Debt—				
Guaranteed bonds, debentures, etc	..	..	921,000	3,622,500
Less Sinking Funds	..	..	194,632	..
Totals, Indirect Liabilities (less Sinking Funds)	..	..	**726,368**	**3,622,500**
Grand Totals	**4,507,659**	**3,971,538**	**53,158,467**	**54,149,465**

Direct and Indirect Debt	Quebec	Ontario	Manitoba	Saskatchewan
	$	$	$	$
Direct Debt—				
Debenture debt	502,943,757	521,991,623	71,994,899	39,629,132
Less Sinking Funds	17,223,935	7,597,651	13,307,750	5,484,812
Net Debenture Debt	485,719,822	514,393,972	58,687,149	34,144,320
Temporary loans and bank overdrafts	25,143,771	46,756,818[1]	12,485,614	3,537,725
Accounts payable and other liabilities	95,243,289	54,982,851[1]	5,778,370	12,646,103
Totals, Direct Liabilities (less Sinking Funds)	**606,106,882**	**616,133,641**	**76,951,133**	**50,328,148**
Indirect Debt—				
Guaranteed bonds, debentures, etc	25,400,000	11,659,927	1,347,600	..
Less Sinking Funds	3,000,000	563,459	—	..
Totals, Indirect Liabilities (less Sinking Funds)	**22,400,000**	**11,096,468**	**1,347,600**	..
Grand Totals	**628,506,882**	**627,230,109**	**78,298,733**	**50,328,148**

For footnote, *see* end of table.

39.—Debt of Municipal and School Corporations, by Province, for their Fiscal Years Ended in 1952, and Totals for 1951 and 1952—concluded

Direct and Indirect Debt	Alberta	British Columbia	Totals	
			1951	1952
	$	$	$	$
Direct Debt—				
Debenture debt	119,751,193	198,786,089	1,392,264,810	1,567,854,000
Less Sinking Funds	963,297	28,081,278	104,093,928	92,868,718
Net Debenture Debt	118,787,896	170,704,811	1,288,170,882	1,474,985,282
Temporary loans and bank overdrafts	4,189,173	1,608,104	89,691,709	105,791,448
Accounts payable and other liabilities	21,591,650	14,353,306	205,608,454	211,416,275
Totals, Direct Liabilities (less Sinking Funds)	**144,568,719**	**186,666,221**	**1,583,471,045**	**1,792,193,005**
Indirect Debt—				
Guaranteed bonds, debentures, etc.	500,000	13,000	23,887,691	43,464,027
Less Sinking Funds	—	—	749,477	3,758,091
Totals, Indirect Liabilities (less Sinking Funds)	**500,000**	**13,000**	**23,138,214**	**39,705,936**
Grand Totals	**145,068,719**	**186,679,221**	**1,606,609,259**	**1,831,898,941**

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[1] Excludes current liabilities of schools and liabilities of other local boards and commissions but includes in lieu thereof amounts due by municipalities to such schools and other local authorities; information required to make the necessary eliminations on this account is not available from published reports.

CHAPTER XXV.—NATIONAL ACCOUNTS AND RELATED STATISTICS

CONSPECTUS

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Section 1.—National Accounts*

The national accounts constitute a set of accounting summaries for the nation as a whole and portray economic activity in terms of transactions taking place between different sections of the economy. By combining and summarizing these operations into their various classes, information can be obtained on the functioning of the economy which is of particular interest to governments concerned with problems of full employment, taxation and prices, and to businessmen concerned with programs of investment and marketing.

This measurement of the nation's output is in terms of established market prices; hence it is necessary to keep in mind that the value of the nation's production may change because of price variations as well as because of changes in the volume of output.

Data are now available showing volume changes in gross national expenditure, in addition to the value figures. Gross national expenditure is shown in Table **3** in constant dollars (i.e., in terms of average prices prevailing in the period 1935-39). Because the gross national expenditure equals the gross national product, these data also reflect volume changes in the production of goods and services as measured by the gross national product. For all other tables the data are expressed in current dollars so that year-to-year changes must be considered in relation to price changes over the period.

An additional stage in the development of the present accounting framework was the publication, in 1953, of the national accounts on a quarterly basis.† These quarterly estimates are a logical extension of the annual national accounts, but the task of preparing them on a reliable and analytically useful basis is rather more difficult because of the scarcity of quarterly data, special problems arising from the measurement of farm production, and problems in connection with seasonal variation.

The tables in this Section cover the more important aspects of the national income analysis in annual terms. Tables **1** and **2** show the main aggregates of national income, gross national product, gross national expenditure and their components and other tables are included to show the source and disposition of personal income, government revenue and expenditure and personal expenditure on consumer goods and services.

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* Prepared in the Research and Development Division, Dominion Bureau of Statistics.

† DBS publication, *National Accounts, Income and Expenditure, by Quarters, 1947-1952,* and quarterly reports thereafter.

National Income.—Net national income at factor cost measures the current earnings of Canadian factors of production (i.e., land, labour, capital) from productive activity. It includes wages and salaries, profits, interest, net rent and net income of farm and non-farm unincorporated business.

Gross National Product.—Gross national product, by totalling all costs arising in production, measures the market value of all final goods and services produced in the current period by Canadian factors of production. It is equal to national income plus net indirect taxes (indirect taxes less subsidies), plus depreciation allowances and similar business costs.

Personal Income.—Personal income is the sum of current receipts of income whether or not these receipts represent earnings from production. It includes transfer payments from government, such as family allowances, unemployment insurance benefits and war service gratuities, in addition to wages and salaries, net income of unincorporated business, interest and dividends and net rental income of persons. It does not include undistributed profits of corporations and other elements of the national income not paid out to persons.

Gross National Expenditure.—Gross national expenditure measures the same aggregate as gross national product, namely, total production of final goods and services at market prices, by tracing the disposition of production through final sales to persons, to governments, to business on capital account (including changes in inventories) and to non-residents (exports). Imports of goods and services, including net payments of interest and dividends to non-residents, are deducted since the purpose is to measure only Canadian production.

Historical Perspective.—Between 1926 and 1953, gross national product increased approximately fivefold in value. Though a substantial part of this apparent growth was the result of rising prices, the growth in physical production was 166 p.c. (Table **3** gives detail, from 1929-53.) The population of Canada in this period increased by 56 p.c. so that the per capita growth in physical product was 70 p.c.—an indication of the growth in living standards and prosperity. This increase is the more remarkable in the light of the disastrous set-back suffered during the depression years and the more recent decline in the average hours worked weekly in industry. In 1933, at the depth of the depression, per capita real production registered a decline of one-third as compared with the relatively prosperous year of 1929.

The historical series reveal many other interesting features of the economy including, among others: the relative stability of the portion of total income going to labour in the form of wages and salaries as opposed to the instability of farm and investment incomes (Table **4**); the increasing significance of government spending in the economy as opposed to the declining importance of exports (Table **2**); the relative changes in the proportion of government revenue represented by direct and indirect taxes (Table **7**); and changing consumer preferences as revealed by the composition of personal expenditure (Table **6**).

Post-War Period to 1952.—The most impressive characteristic of the Canadian economy in the post-war period has been the sustained high rate of industrial expansion and resource development and the accompanying growth in the country's productive capacity. During the years from 1947 to 1952, the physical output of goods and services as measured by the gross national product in constant dollars increased by 26 p.c., or 5 p.c. per year, compounded annually, compared with an average increase of 4 p.c. per year during the period from 1926 to 1952.

Accompanying the expansion in the country's physical volume of output from 1947 to 1952, the population of Canada increased by 15 p.c. This increase in population has provided a wider market for the country's production and made available additional workers for the labour force. Almost without exception, the labour force was fully employed during the period, the proportion of persons without jobs varying annually between 1·5 p.c. and 2·7 p.c. The number of persons with jobs increased by approximately 8 p.c. between 1947 and 1952, substantially below the rise of 26 p.c. in the physical volume of production, and indicating a considerable gain in output per person.

The first stage in Canada's post-war development covered the period of reconversion and transition to a peace economy ending in 1948. It was characterized by powerful consumer demand, the progressive relaxation of controls, and rapidly rising prices, and must be viewed in the light of two fundamental considerations: the large volume of wartime savings accumulated by individuals and by businesses, and the enormous backlog of deferred demand for all types of consumer and investment goods generated by wartime shortages and restrictions. Accordingly, consumer expenditures rose to new high levels in the reconversion period and business embarked on a capital expansion program of large magnitude. The increases in expenditure of the personal and business sectors offset the sharp declines in government expenditure on goods and services which might otherwise have brought about a serious fall in production and employment. The transition to a peacetime economy was accomplished with a minimum of dislocation and only a moderate and short-lived drop in the physical volume of production. The heavy domestic and foreign demands on production, coupled with high and rising prices in export markets and of imported goods and materials, exerted powerful upward pressures on the Canadian price level.

Though inflationary pressures continued throughout most of 1948, there was a pronounced levelling off in prices toward the end of the year. The strong sellers' market which had existed since the end of World War II appeared to have weakened considerably in 1948, reflecting the attainment of a better balance between supply and demand. At the same time, there was an easing off in external pressures on the Canadian price level.

The next stage of Canada's post-war development, 1949 to mid-1950, was, in general, one of comparative price stability accompanied by a high level of production, employment and income. The excessive demands of the previous few years had yielded to a more balanced pattern in relation to the supply of goods and services. A notable feature of the year 1949 was the levelling off in the quarterly rate of expenditure for fixed investment in durable assets and, for the year as a whole, the value and volume gains in investment expenditures were considerably less than in the preceding two years. However, consumer expenditures remained high in 1949 and, in volume terms, showed a very substantial gain over the previous year.

Economic developments in Canada, in 1949, may be contrasted with those in the United States, which was then undergoing a mild recession. Business investment in plant and equipment and in residential construction was falling off in the United States in the first half of the year, but the major setback occurred in the inventory sector which shifted from a position of net accumulation to one of fairly heavy liquidation. However, after eliminating the effect of seasonal influences, consumer spending remained relatively stable throughout the year. In Canada, the build-up of physical stocks of business inventories was considerable throughout the first half of 1949, although the rate was moderate for the year as a whole. Moreover, the value of consumer purchases in Canada, after allowing for seasonal factors, rose very sharply between the first and second quarters and remained at a high level for the remainder of the year. These two Canadian developments provided the main source of strength in the economy at a time when fixed investment expenditure in Canada was levelling off. Labour income continued to rise in Canada, though at a less rapid rate than in 1948, while the number of persons without jobs rose only moderately. Reflecting all these developments, the Canadian economy did not experience the decline in national income which accompanied economic developments in the United States in 1949.

The third stage in Canada's post-war development covers the period from mid-1950 to the end of 1952, during which the influences set in motion by the outbreak of war in Korea were dominant. This period was characterized by adjustment of the economy to meet the greatly expanded requirements for defence and a renewal of inflationary pressures which were of a severe but temporary nature. Three fairly clear-cut phases are discernible in this stage of Canada's post-war development, and overlap the divisions of the annual data. Each phase is characterized by a significant difference in the pattern and strength of final demand with the change occurring within the calendar year.

The first phase, covering the period mid-1950 to about mid-1951, was one of heavy abnormal demands for consumer goods and business inventories, based on fears of shortages and expectations of higher prices. In this period, defence expenditures played a limited, though increasingly important role, with the rearmament program mainly in the preparatory stage. Prices rose rapidly.

The second phase began about the middle of 1951, when a reaction to this heavy forward buying apparently set in and inflated consumer and business demands subsided against a background of anti-inflationary measures enacted by the Federal Government. The volume of housing construction also fell off sharply. The major expansionary elements in the economy in this period were a growing volume of requirements for defence, investment in non-residential construction, machinery and equipment and exports. The strong inflationary influences of the immediate post-Korean period began to subside and, by early 1952, the downward trend of prices had become general.

A third pattern is discernible beginning early in 1952, when a strong revival of consumer purchasing and a sharp increase in housing outlays were superimposed on the growing volume of expenditures in other sectors. By the middle of 1952, the volume of consumer purchasing was once again exerting an important expansionary influence based on the increase in 'real' income which had been achieved since the beginning of the year, while housing outlays were continuing to rise. The trend of prices was downward throughout the year.

Current Perspective.—*Gross National Product and National Income.*—The market value of the nation's total production, as measured by the gross national product, was $24,350,000,000 in 1953, an increase of 5 p.c. over 1952. As prices remained relatively steady throughout the year, the total volume increase was about 4 p.c. Although the 1953 grain crop was one of the largest on record, it was considerably below the extraordinary 1952 level, so that a decline in production occurred in the agricultural sector of the economy. The gain in non-agricultural production was thus somewhat higher than the total of 4 p.c. noted above, or about 5 p.c. Accompanying the increase of 5 p.c. in the volume of non-farm output, there was a rise of about 2 p.c. in the number of persons with jobs in the non-agricultural sector of the economy. Thus, the figures indicate a gain in over-all output per working person in the non-farm sector.

National income rose by 4·5 p.c. in 1953, to reach a total of $19,043,000,000. Wages, salaries and supplementary labour income, the largest component of national income, amounted to $11,661,000,000 in 1953, an increase of about 8 p.c. over the previous year. Inasmuch as consumers' prices remained relatively unchanged, this increase represented a 'real' gain in income for wage and salary earners. However, the quarter-to-quarter trend in wages and salaries, seasonally adjusted, which had been very strongly upward in the preceding two-year period, showed no significant rise after the second quarter of 1953. Corporation profits before taxes, the largest single item in investment income, showed a drop of about 3 p.c. between 1952 and 1953. Accrued net income of farm operators from farm production amounted to $1,649,000,000 in 1953, a drop of 11 p.c. from the high level of the previous year. Net income of non-farm unincorporated business increased by 8 p.c. in 1953. The largest single gain was in residential construction, reflecting the sharp increase in house building.

1.—National Income and Gross National Product, 1929-53

(Millions of dollars)

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Wages, salaries and supplementary labour income	2,929	2,575	4,940	5,323	8,311	9,716	10,818	11,661
Military pay and allowances	8	32	1,068	340	137	201	270	309
Investment income	836	917	1,829	1,975	3,155	3,642	3,723	3,744
Net Income of Unincorporated Business—								
Accrued net income of farm operators from farm production	408	385	1,185	1,112	1,503	2,072	1,858	1,649
Net income of non-farm unincorporated business	608	464	804	1,071	1,444	1,507	1,552	1,680
Net National Income at Factor Cost	**4,789**	**4,373**	**9,826**	**9,821**	**14,550**	**17,138**	**18,221**	**19,043**
Indirect taxes less subsidies	681	733	1,111	1,269	2,018	2,478	2,744	2,908
Depreciation allowances and similar business costs	709	610	957	903	1,636	1,910	2,128	2,336
Residual error of estimate	−13	−9	60	33	−1	−52	+92	63
Gross National Product at Market Prices	**6,166**	**5,707**	**11,954**	**12,026**	**18,203**	**21,474**	**23,185**	**24,350**

[1] Newfoundland included from 1950.

Gross National Expenditure.—Aggregate final demand, together with additions to inventories, increased by approximately $1,600,000,000 or 5 p.c. in 1953, with consumer expenditures accounting for about one-half of the gain. Additional expansionary elements were provided by housing outlays, which rose by $275,000,000, government expenditure on goods and services which rose by $200,000,000 and investment in new non-residential construction which showed a gain of $170,000,000. Additions to business inventories were quite substantial in 1953, particularly in the second and third quarters of the year: for the year as a whole, they showed a net positive change from last year of $570,000,000. Exports of goods and services declined, and additions to stocks of grain and farm inventories were also somewhat smaller than in 1952.

The large expansion in total demand referred to above was met mainly out of the increase in the nation's production of goods and services, which rose by about $1,100,000,000 in terms of current dollars. The gap not covered by the production increment was met, on balance, from foreign sources of supply, as reflected in the large increase in imports of goods and services which occurred in 1953.

Price influences featured less prominently in the gain in the value of total production in 1953 than in the preceding two years. While the major components of gross national expenditure were variously affected by price changes, over-all price effects were small, reflecting mainly price stability in the important field of consumer goods and services.

Personal expenditure on consumer goods and services amounted to $15,165,000,000 in 1953, a gain of 5 p.c. over 1952. Inasmuch as consumer prices were substantially unchanged from the average of the previous year, the volume increase was also about 5 p.c. In the goods category, durable goods showed the largest percentage increase amounting to about 13 p.c., the greater part accounted for by sales of new automobiles which rose by 24 p.c., and by purchases of television sets, factory shipments of which more than doubled. Non-durable goods purchases showed a gain of nearly 3 p.c. in 1953, reflecting largely an increase in retail sales of food. Consumer purchases of services expanded in most categories, with the total increase amounting to about 7 p.c.

Government expenditure on goods and services rose to $4,408,000,000 in 1953, a gain of 5 p.c. over the previous year. Defence expenditure rose to $1,909,000,000, an increase of 6 p.c.; this compares with a gain of 56 p.c. in 1952 and 135 p.c. in 1951. Defence spending, though at a high level, was of much less importance in the total expansion of demand in 1953 than in the two preceding years.

Gross domestic investment (excluding investment in inventories) increased to $4,709,000,000 in 1953, an advance of 11 p.c. over 1952. The entire increase is accounted for by a gain in the value of new construction put in place, with new housing showing the most striking gain; investment in new machinery and equipment showed little change.

The value of investment inventories (business inventories, farm inventories and grain in commercial channels) in 1953 amounted to $572,000,000—more than double the 1952 value. Additions to stocks of business inventories, in 1953, amounted to $376,000,000 in value terms, compared with a net liquidation in 1952 of $88,000,000. They represented about 5 p.c. of total book value holdings by all groups, and were in proportion to increases in non-farm output. The increments in 1953 were concentrated mainly in the manufacturing, wholesale and retail trade groups.

Canada incurred a current account deficit in 1953 amounting to $440,000,000 on international transactions in goods and services. This contrasted with a surplus of $173,000,000 in 1952. The major factors underlying the change in the current account balance were a substantial increase in merchandise imports and a small decline in merchandise exports. A 9-p.c. gain in imports reflected the higher levels of consumer purchasing, inventory accumulation, and general industrial activity in Canada; there was, moreover, an improvement in world supplies of goods at competitive prices. The moderate decline in exports was associated with lower prices for some goods, import restrictions in overseas countries, increased world supplies of wheat and some contraction in foreign demand for certain other commodities.

2.—Gross National Expenditure, 1929-53

(Millions of dollars)

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Personal expenditure on consumer goods and services	4,393	3,904	6,187	7,977	12,029	13,273	14,403	15,165
Government expenditure on goods and services	682	735	5,022	1,832	2,326	3,243	4,204	4,408
Gross Domestic Investment—								
New residential construction	247	185	225	371	801	781	786	1,061
New non-residential construction	486	166	257	443	1,026	1,260	1,554	1,726
New machinery and equipment	597	254	377	584	1,389	1,769	1,916	1,922
Change in inventories	61	331	−46	519	960	1,620	241	572
Exports of goods and services	1,632	1,451	3,561	3,210	4,183	5,089	5,573	5,420
Deduct: Imports of goods and services	−1,945	−1,328	−3,569	−2,878	−4,513	−5,613	−5,400	−5,860
Residual error of estimate	+13	+9	−60	−32	+2	+52	−92	−64
Gross National Expenditure at Market Prices	**6,166**	**5,707**	**11,954**	**12,026**	**18,203**	**21,474**	**23,185**	**24,350**

[1] Newfoundland included from 1950.

3.—Gross National Expenditure in Constant (1935-39) Dollars, 1929-53

(Millions of dollars)

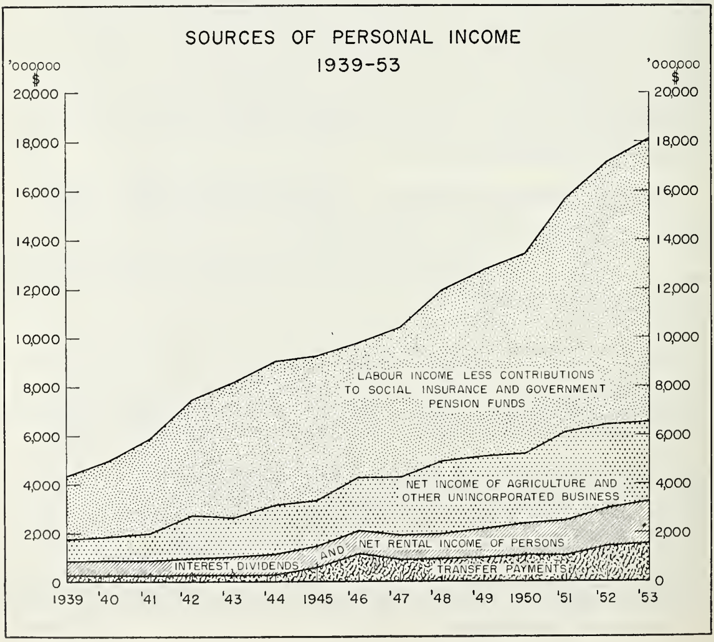
Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Personal expenditure on consumer goods and services	3,685	3,820	5,030	6,189	7,022	6,978	7,405	7,809
Government expenditure on goods and services	629	742	4,001	1,484	1,375	1,713	2,131	2,160
Gross Domestic Investment—								
New residential construction	214	180	150	225	340	290	284	378
New non-residential construction	439	164	204	330	554	606	699	748
New machinery and equipment	575	247	298	467	784	890	959	956
Change in inventories	48	338	−77	226	303	453	198	302
Exports of goods and services	1,314	1,494	2,614	2,079	2,027	2,215	2,443	2,445
Deduct: Imports of goods and services	−1,578	−1,330	−2,450	−1,930	−2,095	−2,342	−2,430	−2,652
Residual error of estimate and adjusting entries	+11	+9	−49	−25	+20	+132	−43	−56
Gross National Expenditure in Constant Dollars	**5,337**	**5,664**	**9,721**	**9,045**	**10,330**	**10,935**	**11,646**	**12,090**

[1] Newfoundland included from 1950.

Personal Income, Personal Saving and Spending.—Personal income amounted to $18,096,000,000 in 1953, an increase of 6 p.c. over 1952 which, in turn, showed a gain of 9 p.c. over 1951. Wages, salaries and supplementary labour income rose 8 p.c. in 1953, or somewhat more than the increase in the total of personal income. Interest, dividends and net rental income of persons increased by 8 p.c., while the combined total of farm and non-farm net income of unincorporated business dropped by 5 p.c. Government transfer payments (excluding government interest) rose by 7 p.c. to $1,469,000,000 in 1953; increases in unemployment insurance benefits, old age security payments and family allowances accounted for the greater part of the gain. The increase in the total of government transfer payments in 1953 was much smaller than in the preceding year, when they showed a gain of 32 p.c., as a result of the introduction of Federal Government old age security payments.

Personal direct taxes rose by $109,000,000 or by 8 p.c. over 1952. The increase was almost entirely attributable to the rise in personal income-tax collections by the Federal Government. The major factor in this increase was the advance in personal income, which yielded higher tax collections despite a reduction in the over-all tax rate which became effective at mid-year. As a percentage of personal income, personal direct taxes were 7·7 p.c. in 1952 and 7·9 p.c. in 1953.

Personal disposable income, that is, personal income less personal direct taxes, rose by $855,000,000, or 5 p.c. over 1952. Personal expenditure rose by $762,000,000 in the same comparison so that personal saving was higher by $93,000,000 in 1953.

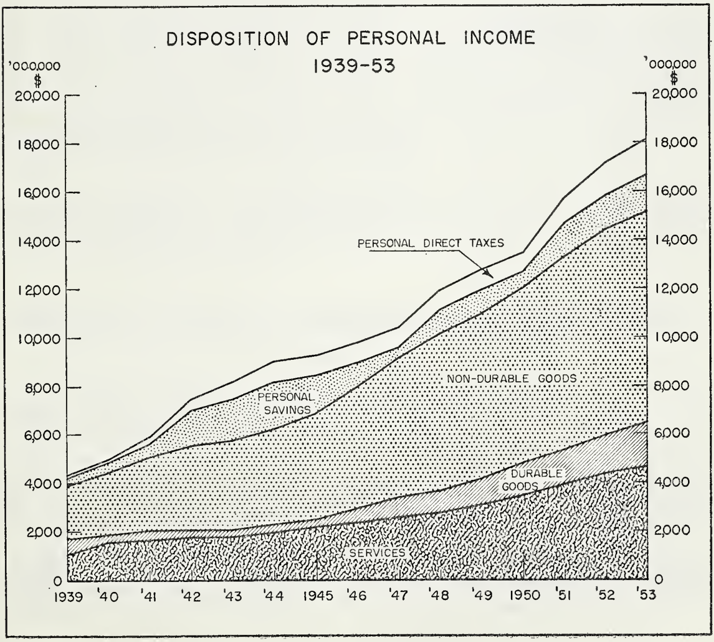


4.—Sources of Personal Income, 1929-53

(Millions of dollars)

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Wages, salaries and supplementary labour income	2,929	2,575	4,940	5,323	8,311	9,716	10,818	11,661
Deduct: Employer and employee contributions to social insurance and government pension funds	−27	−35	−133	−149	−256	−329	−357	−386
Military pay and allowances	8	32	1,068	340	137	201	270	309
Net income received by farm operators from farm production	407	435	1,206	1,090	1,402	2,108	1,860	1,616
Net income of non-farm unincorporated business	608	464	804	1,071	1,444	1,507	1,552	1,680
Interest, dividends and net rental income of persons	616	602	836	957	1,295	1,406	1,566	1,689
Transfer payments (excluding interest)—								
From governments	93	229	259	1,106	1,033	1,032	1,368	1,469
Charitable contributions from corporations	5	6	11	12	25	27	30	30
Net bad debt losses of corporations	18	12	11	11	23	25	25	28
Totals, Personal Income	**4,657**	**4,320**	**9,002**	**9,761**	**13,414**	**15,693**	**17,132**	**18,096**

[1] Newfoundland included from 1950.



5.—Disposition of Personal Income, 1929-53

(Millions of dollars)

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Personal Direct Taxes—								
Income taxes	34	62	772	711	612	890	1,177	1,287
Succession duties	16	28	39	54	66	69	72	73
Miscellaneous taxes	18	22	27	31	62	71	74	72
Purchases of goods and services	4,393	3,904	6,187	7,977	12,029	13,273	14,403	15,165
Personal Savings	196	304	1,977	988	645	1,390	1,406	1,499
Totals, Personal Income	**4,657**	**4,320**	**9,002**	**9,761**	**13,414**	**15,693**	**17,132**	**18,096**

[1] Newfoundland included from 1950.

6.—Personal Expenditure on Consumer Goods and Services, 1939-53

(Millions of dollars)

Item	1939	1944	1946	1950[1]	1951	1952	1953
Food	919	1,769	2,085	3,039	3,488	3,665	3,755
Tobacco and alcoholic beverages	281	624	846	1,094	1,155	1,298	1,334
Clothing and personal furnishings	490	966	1,191	1,568	1,708	1,823	1,843
Shelter	629	807	866	1,376	1,560	1,717	1,891
Household operation	522	660	935	1,504	1,590	1,794	1,885
Transportation	392	465	771	1,475	1,559	1,697	1,885
Personal and medical care and death expenses	257	369	478	730	813	888	935
Miscellaneous	414	527	805	1,243	1,400	1,521	1,637
Totals	**3,904**	**6,187**	**7,977**	**12,029**	**13,273**	**14,403**	**15,165**
Durable goods	292	296	590	1,343	1,399	1,574	1,778
Non-durable goods	2,210	3,928	5,073	7,241	7,969	8,475	8,725
Services	1,402	1,963	2,314	3,445	3,905	4,354	4,662

[1] Newfoundland included from 1950.

7.—Federal, Provincial and Municipal Government Revenue and Surplus or Deficit, 1929-53

(Millions of dollars)

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Direct Taxes: Persons—								
Income taxes	34	62	772	711	612	890	1,177	1,287
Succession duties	16	28	39	54	66	69	72	73
Miscellaneous taxes	18	22	27	31	62	71	74	72
Direct Taxes: Corporations—								
Income and excess profits taxes	48	115	598	654	981	1,429	1,333	1,174

For footnote, *see* end of table.

7.—Federal, Provincial and Municipal Government Revenue and Surplus or Deficit, 1929-53—concluded

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Withholding taxes	—	10	27	29	54	56	55	54
Indirect taxes	686	716	1,378	1,505	2,081	2,606	2,843	3,017
Investment Income—								
Interest	74	71	105	120	155	181	216	212
Profits of government business enterprises	29	19	222	243	245	275	313	340
Employer and employee contributions to social insurance and government pension funds	27	35	133	149	256	329	357	386
Deficit(+) or surplus(−) (on transactions relating to the national accounts)	−9	+41	+2,566	+133	−648	−1,053	−301	−136
Totals, Revenue (Plus deficit or minus surplus)	**923**	**1,119**	**5,867**	**3,629**	**3,864**	**4,853**	**6,139**	**6,479**

[1] Newfoundland included from 1950.

8.—Federal, Provincial and Municipal Government Expenditure, 1929-53

(Millions of dollars)

Item	1929	1939	1944	1946	1950[1]	1951	1952	1953
Purchases of goods and services	682	735	5,022	1,832	2,326	3,243	4,204	4,408
Transfer Payments—								
Interest	143	172	319	455	442	450	468	493
Other	93	229	259	1,106	1,033	1,032	1,368	1,469
Subsidies	5	−17	267	236	63	128	99	109
Totals, Expenditure	**923**	**1,119**	**5,867**	**3,629**	**3,864**	**4,853**	**6,139**	**6,479**

[1] Newfoundland included from 1950.

Section 2.—Canada's International Investment Position*

A large balance of Canadian indebtedness to other countries has always been characteristic of Canada's international investment position. Much of the development of Canada has been financed by investments of capital from other countries, particularly in earlier decades. This balance of indebtedness has been reduced from the levels obtaining immediately before World War II which, in turn, were lower than the earlier peak period around 1930. Net indebtedness to other countries at the end of 1953 was $5,700,000,000 compared with about $6,500,000,000 in 1930.

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* Prepared in the Balance of Payments Section, International Trade Division, Dominion Bureau of Statistics. A more extended review appears in DBS report, *Canada's International Investment Position, Selected Years 1926 to 1949*, and statistics for more recent years in the reports, *The Canadian Balance of International Payments, 1953, and International Investment Position* and *The Canadian Balance of International Payments in the Post-War Years (1946-1952).*

Foreign Investments in Canada.—The relative importance of British and United States capital invested in Canada has changed greatly in recent decades. British capital constituted the largest part of the external capital invested in Canada before World War I but United States investments underwent a rapid development during and after that War. By 1926, the first year for which official estimates are available, United States investments in Canada had a value of $3,196,000,000 compared with British investments of $2,636,000,000. During the 1930's, reductions occurred in the amount of external capital invested in Canada.

Further growth in United States investments in Canada took place during World War II and, by the end of the War, these investments had reached a new peak, whereas British investments in Canada were sharply reduced by repatriation of securities. As a result of these divergent trends in British and United States investments, total non-resident investments in Canada increased only moderately during World War II.

In the post-war years, there have been substantial increases in the value of United States capital invested in Canada; by the end of 1953, the total reached approximately $8,600,000,000, a growth of about $3,600,000,000 in the eight years from 1945. The largest increases occurred in the years following 1948, and more particularly since 1950, as a result of substantial net inflows of capital for long-term investment. Direct investments in nearly 3,000 companies in Canada, controlled in the United States, are the most important form of that country's investment in Canada, and were valued at about $5,000,000,000 at the end of 1953. The growth in this group of investments amounted to $2,700,000,000 in the eight post-war years, more than 40 p.c. of this representing the retention of earnings. The rate of this growth has been accelerated in recent years by the development of petroleum and other resources. In 1946 to 1953, petroleum development has accounted for about one-half of Canada's net capital import from the United States, so that by the end of 1953, United States investment in the industry in Canada amounted to $1,144,000,000, a dramatic increase from the total of $117,000,000 at the end of 1945. This investment now represents about one-sixth of United States investment in all Canadian industry.

Holdings of government, municipal, and corporate portfolio securities, which amounted to about $3,355,000,000 at the end of 1953, were the other major form of United States investment in Canada. The growth since 1945 of $800,000,000 in these holdings has been relatively much smaller than growth in direct investments. In recent years, the sale abroad of new issues of Canadian securities has been the principal factor contributing to the increase.

By the end of 1953, British long-term investments in Canada were valued at about $2,000,000,000, an increase of $300,000,000 since 1949. Despite recent increases, however, British investment in Canada is still much smaller than in the pre-war period. The value of investments in Canada of all other overseas countries amounted to almost $500,000,000 at the end of 1953—much lower than the investment from Canada's historic sources of capital, the United States and the United Kingdom.

Canadian capital has been the principal source of financing for Canadian development for many years past. Even in the recent years of current account deficit, the net contribution by non-residents and foreign-controlled companies to the savings used for all types of investment in Canada was only a small fraction of the total. Thus, the ratio of investments of external capital in relation to total investments of capital in Canada has been declining for some years. Because of the variety of types of investment that must be compared, it is difficult to express this relationship in terms of any simple ratio.

Important changes have taken place in the relative positions of different types of foreign investment in Canada. Non-resident investors now hold about one-tenth of the funded debt of Canadian governments and municipalities; their holdings in 1936 represented about one-quarter of the smaller total then outstanding. In the intervening years this debt has nearly tripled, about 97 p.c. being financed from the savings of Canadians.

Non-resident ownership in the broad field of Canadian industry and commerce has also been declining. By 1951, it represented about 33 p.c. as compared with 38 p.c. before the War. Despite the tremendous in-flows of foreign long-term capital into Canadian enterprises in the post-war years, Canadian capital maintained its proportion of the total. The concentration of post-war investment by foreigners in manufacturing and mining enterprises has increased their share of these fields. Nearly 60 p.c. of the capital of mining, smelting and petroleum exploration and development companies was non-resident-owned at the end of 1951 compared with 40 p.c. in 1939. The share of foreign capital varies widely in different fields of manufacturing. The percentage is comparatively high in some branches such as non-ferrous metals, the automobile industry and petroleum refining, and is comparatively low in other fields such as textiles, and primary iron and steel. In some industries such as newsprint and wood products, non-resident capital plays a very important part but the major share of ownership is Canadian.

There are other important forms of Canadian wealth whose valuation presents serious difficulties, such as farm property and residential real estate. These assets are held mainly in the non-corporate sector of the economy and are owned predominantly by Canadians.

9.—Estimate of the Canadian Balance of International Indebtedness, as at Dec. 31, 1939, 1945 and 1949-53

NOTE.—Totals are rounded and may not represent the sum of their components. They are exclusive of short-term commercial indebtedness and blocked currencies.

(Billions of dollars)

Item	1939	1945	1949	1950	1951	1952	1953
Canadian Liabilities (Foreign Capital Invested in Canada)—							
Direct investments	2·3	2·7	3·6	4·0	4·5	5·2	5·8
Government and municipal bonds	1·7	1·7	1·8	2·0	2·1	2·0	2·1
Other portfolio investments	2·6	2·4	2·3	2·4	2·5	2·7	2·9
Miscellaneous investments	0·3	0·3	0·3	0·3	0·4	0·5[1]	0·4
Totals, Non-resident Long-term Investment in Canada	6·9	7·1	8·0	8·7	9·5	10·4	11·2
Equity of non-residents in Canadian assets abroad	0·2	0·2	0·3	0·3	0·4	0·4	0·5
Canadian dollar holdings of non-residents	0·3	0·3	0·4	0·6	0·4	0·3	0·3
Canadian short-term assets of IMF and IBRD	—	—	0·3	0·3	0·3	0·3	0·3
Gross Liabilities	**7·4**	**7·6**	**8·9**	**9·9**	**10·6**	**11·4**	**12·3**
United States	4·5	5·4	6·4	7·1	7·9	8·6	9·2
United Kingdom	2·6	1·8	1·8	2·0	1·9	2·0	2·1
Other countries, IMF and IBRD	0·3	0·4	0·7	0·8	0·8	0·8	0·9

For footnotes *see* end of table.

9.—Estimate of the Canadian Balance of International Indebtedness, as at Dec. 31, 1939, 1945 and 1949-53—concluded

Item	1939	1945	1949	1950	1951	1952	1953
Canadian Assets (Canadian Capital Invested Abroad)—							
Direct investments	0·7	0·7	0·9	1·0	1·2	1·3	1·4
Portfolio investments	0·7	0·6	0·6	0·6	0·6	0·8[1]	0·8
Government of Canada loans and advances	—	0·7	2·0	2·0	1·9	1·9	1·8
Government of Canada subscriptions to IMF and IBRD	—	—	0·4	0·4	0·4	0·4	0·4
Totals, Canadian Long-term Investments abroad	1·4	2·0	4·0	4·0	4·1	4·4	4·4
Government of Canada holdings of gold and foreign exchange	0·5	1·7	1·2	1·9	1·8	1·8	1·8
Other Canadian short-term assets abroad	—	0·1	0·1	0·1	0·1	0·3	0·4
Gross Assets	**1·9**	**3·8**	**5·2**	**5·9**	**6·0**	**6·5**	**6·6**
Government of Canada holdings of gold and foreign exchange	0·5	1·7	1·2	1·9	1·8	1·8	1·8
United States[2]	0·9	0·9	1·1	1·1	1·4	1·8	1·9
United Kingdom[2]	0·1	0·7	1·6	1·6	1·5	1·6	1·5
Other countries, IMF and IBRD	0·4	0·5	1·3	1·3	1·3	1·3	1·3
Canadian Net International Indebtedness—Net Liabilities	**5·5**	**3·9**	**3·7**	**4·0**	**4·6**	**4·9**	**5·7**
Government of Canada holdings of gold and foreign exchange	−0·5	−1·7	−1·2	−1·9	−1·8	−1·8	−1·8
United States[2]	3·6	4·6	5·3	6·0	6·5	6·8	7·3
United Kingdom[2]	2·5	1·1	0·2	0·4	0·4	0·4	0·6
Other countries, IMF and IBRD	−0·1	−0·1	−0·6	−0·5	−0·5	−0·5	−0·4

[1] New series. [2] Exclusive of Government of Canada holdings of gold and foreign exchange.

10.—Foreign Capital Invested in Canada, by Type of Investment, as at Dec. 31, 1933, 1946 and 1949-52

Type of Investment	1933	1946	1949	1950	1951	1952
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
Government Securities—						
Federal	752	750	975	1,141	1,013	858
Provincial	572	594	534	565	771	822
Municipal	394	267	246	256	319	345
Totals, Government Securities	1,718	1,611	1,755	1,962	2,103	2,025
Public Utilities—						
Railways	2,245	1,583	1,445	1,446	1,436	1,429
Other	625	557	494	547	575	636
Totals, Public Utilities	2,870	2,140	1,939	1,993	2,011	2,065
Manufacturing	1,422	1,895	2,539	2,754	3,115	3,529
Mining and smelting	338	386	494	631	815	1,072
Merchandising	192	238	300	330	388	436
Financial institutions	480	557	548	573	591	638
Other enterprises	75	69	83	98	120	132
Miscellaneous assets	270	282	302	320	328	455[1]
Totals, Investment	**7,365**	**7,178**	**7,960**	**8,661**	**9,471**	**10,352**
United States[2]	4,492	5,157	5,905	6,548	7,259	7,976
United Kingdom[2]	2,683	1,668	1,715	1,748	1,776	1,886
Other countries	190	353	340	365	436	490

[1] New series. [2] Includes some investments held for residents of other countries.

11.—Foreign Capital Invested in Canada, by Type of Investment, classified by Estimated Distribution of Ownership, as at Dec. 31, 1952

Note.—Common and preferred stocks are at book values as shown in the balance sheets of the issuing companies; bonds and debentures are valued at par; and liabilities in foreign currencies are converted into Canadian dollars at par of exchange.

Type of Investment	Estimated Distribution of Ownership			Total Investments of Non-Residents
	United States[1]	United Kingdom[1]	Other Countries	
	$'000,000	$'000,000	$'000,000	$'000,000
Government Securities—				
Federal	737	68	53	858
Provincial	782	38	2	822
Municipal	307	36	2	345
Totals, Government Securities	1,826	142	57	2,025
Public Utilities—				
Railways	644	699	86	1,429
Other	547	55	34	636
Totals, Public Utilities	1,191	754	120	2,065
Manufacturing	2,912	552	65	3,529
Mining and smelting	972	61	39	1,072
Merchandising	307	111	18	436
Financial institutions	395	140	103	638
Other enterprises	116	12	4	132
Miscellaneous assets[2]	257	114	84	455
Totals, Investments	**7,976**	**1,886**	**490**	**10,352**

[1] Includes some investments held for residents of other countries. [2] New series.

Canadian Assets Abroad.—Canada's external assets have changed greatly in size and composition in recent years. The total value, including holdings of gold and foreign currencies, rose from about $1,900,000,000 in 1939 to $6,600,000,000 at the end of 1953. The principal factor in this increase was the extension by the Federal Government of loans and export credits to the United Kingdom and other countries. At the end of 1953, Canadian Government credits outstanding totalled nearly $1,800,000,000. Included in this total was $150,000,000 outstanding on the 1942 loan to the United Kingdom, $1,142,000,000 on the 1946 loan to the United Kingdom and about $450,000,000 of post-war export credits and advances. In addition, at the end of 1953, official holdings of gold and foreign exchange aggregated about $1,779,000,000. Other official Canadian assets include Canada's subscriptions to the capital of the International Bank and the International Monetary Fund which, by the end of 1952, amounted to $70,900,000 and $322,500,000, respectively. A small part of the subscription to the Bank was in the form of convertible exchange and $75,000,000 of the subscription to the Fund was in gold. The remainder of both subscriptions was made in the form of demand notes of the Federal Government or in Canadian funds.

Besides the officially owned assets referred to above, there were the privately owned investments in the form of foreign securities and property owned by Canadian companies and individuals. In 1939, these privately owned assets constituted most of the total value of Canadian assets abroad, whereas, since the end of World War II, they have amounted to only a minor part of the total, chiefly because of the sharp rise in officially owned assets. Canadian assets abroad, at the end of 1953, include privately owned long-term direct and portfolio investments valued at

$2,200,000,000. These have grown from $1,300,000,000 at the end of 1945, a rate of increase somewhat higher than for foreign private long-term investment in Canada.

About two-thirds of Canada's direct investments abroad are in the United States. These investments, on a per capita basis, are about twice the value of United States direct investments in Canada and are mainly in the beverage, farm implement and petroleum industries and in railways, though a wide range of other concerns is also involved. Investment in other parts of the world is widely distributed and is to be found particularly in industrial and commercial concerns, mining and utilities. About two-thirds of the portfolio holdings abroad are also in the form of United States securities, but Canada has extensive portfolio investments in other parts of the world, particularly Latin America.

12.—Canadian Assets Abroad, 1939, 1948 and 1950-52

Note.—Excludes investments of insurance companies and banks, Canada's subscriptions to international financial institutions and short-term assets, other than official holdings of gold and foreign exchange. Holdings of stocks are at book values as shown in the books of issuing companies; holdings of bonds are shown at par values. Foreign currencies are converted into Canadian dollars at current market rates. The series for portfolio investment was reconstructed in 1952 and is not strictly comparable with preceding years.

Assets	1939	1948	1950	1951	1952
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
Direct investments in businesses outside Canada	671	788	990	1,166	1,269
Portfolio holdings of foreign securities	719	605	598	609	833
Government credits	31	1,878	1,990	1,922	1,866
Official balances abroad and gold	459	1,006	1,876	1,848	1,779
Totals, Canadian Assets Abroad	**1,880**	**4,277**	**5,454**	**5,545**	**5,747**

13.—Canadian Assets Abroad, by Location of Investment, as at Dec. 31, 1952

Note.—*See* headnote to Table 12.

Location of Investment	Direct Investments	Portfolio Investment		Government Credits	Official Holdings of Exchange	Total Investments
		Stocks	Bonds	Bonds	Total	
	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000	$'000,000
United States	966	450	89	—	811	2,316
United Kingdom	81	17	14	1,357	8	1,477
Other Commonwealth countries	112	6	8	—	—	126
Other foreign countries	110	196	53	509	—	868
Official gold holdings	—	—	—	—	960	960
Totals	**1,269**	**669**	**164**	**1,866**	**1,779**	**5,747**

Section 3.—Corporation Profits and Income to Shareholders

Estimates of corporation profits presented in this Section cover all Canadian corporations. The figures for the years 1944 to 1952 are based on the reports *Taxation Statistics* published annually by the Taxation Division, Department of National Revenue, Ottawa. Prior to 1944, corporation financial statistics were made the subject of a comprehensive study in the Department of National Revenue.

Profits, before taxes of Canadian corporations, are shown in Table **14** for selected years 1929-53. From a pre-war peak of $530,000,000 in 1929, they dropped to $17,000,000 in 1932, and then, with the exception of a decline in 1938, rose steadily from 1932 to 1942, the wartime peak. From 1944 to 1951, they rose fairly steadily, but in 1952 and 1953 there were declines of 6 p.c. and 3 p.c., respectively. In 1953, corporation profits before taxes were $2,550,000,000, down $260,000,000 from the record $2,810,000,000 in 1951.

Corporation profits taxes, which were relatively low during the period 1929 to 1939, ranged from 40 p.c. to 50 p.c. of profits during the war period. After the War they dropped to 35 p.c. of profits in 1948, but were over 50 p.c. in both 1951 and 1952; in 1953 they declined to 46 p.c. It should be noted that the elective tax on undistributed income amounted to $54,000,000 in 1950, the year in which the tax was initiated, $48,000,000 in 1951, but only $10,000,000 in both 1952 and 1953.

Dividends paid by corporations (excluding dividends paid to other Canadian corporations) reached a peak in 1950 of $681,000,000 and were $643,000,000 in 1953. Undistributed corporation profits also reached a peak in 1950, but declined in both 1951 and 1952. In 1953, however, the decline in income-tax payments from 1952 much more than offset a small increase in dividend payments, and undistributed profits increased from $634,000,000 in 1952 to $643,000,000 in 1953.

14.—Profits, Taxes and Dividends of Canadian Corporations, 1929-53

(Millions of dollars)

Item	1929	1932	1939	1942	1944	1946	1949	1950	1951	1952	1953
Corporation profits before taxes[1]	530	17	689	1,292	1,221	1,455	1,906	2,506	2,810	2,640	2,550
Deduct: income and excess profits taxes[2]	48	32	115	629	598	654	731	981	1,429	1,333	1,174
Corporation profits after taxes	482	−15	574	663	623	801	1,175	1,525	1,381	1,307	1,376
Deduct: dividends paid and charitable donations	271	157	302	308	282	390	568	681	660	634	643
Undistributed corporation profits	211	−172	272	355	341	411	607	844	721	673	733

[1] Include depletion charges and charitable donations, and are adjusted for corporate losses, renegotiation of war contracts and conversion to a calendar-year basis. [2] Includes elective tax on undistributed income of $54,000,000 in 1950, $48,000,000 in 1951, $10,000,000 in 1952, and $10,000,000 in 1953.

Analysis by Industries.—Detailed data on profits by industries are available from 1944. Corporation profits as shown in Table **15** do not agree with those in the national accounts since the national accounts figures include depletion charges and charitable donations. National accounts figures are also adjusted for renegotiation of war contracts and for conversion to a calendar-year basis. Provincial taxes and the elective tax on undistributed income are not deducted in arriving at net profits after taxes, since these are not available by industry. It may be noted that the 1952 profits-after-tax figures in Table **15** include tax liabilities of the agreeing provinces since, in that year, they were combined with federal tax liabilities. Profits of Newfoundland corporations are included for 1950 and later years.

In 1952 profits before taxes declined by $182,000,000, or by 6·8 p.c. from 1951 totals. Of the 34 sub-groups listed in Table **15**, 19 showed declines in profits while 15 showed increases. The largest decline in dollar terms was in the pulp and paper group whose profits dropped from $376,100,000 in 1951 to $259,700,000 in 1952, but several groups had larger percentage declines.

Profits after taxes in 1952 declined 13·6 p.c. from 1951, as compared with a 6·8 p.c. decline in profits before taxes. However, only one industry—agriculture—showed a net loss after taxes.

15.—Corporation Profits, by Industry, before and after Federal Income Taxes, 1946 and 1950-52

(Millions of dollars)

Note.—Figures are for the company fiscal years ended within the calendar years. Source: *Taxation Statistics* published annually by the Taxation Division, Department of National Revenue, Ottawa.

Industry	Net Income before Federal Income Taxes				Net Income after Federal Income Taxes			
	1946	1950[1]	1951	1952	1946	1950[1]	1951	1952
Agriculture	2·2	1·7	1·8	0·3	0·8	0·9	0·8	−0·6
Fishing	1·3	1·3	0·6	0·4	0·8	0·9	0·4	0·2
Forestry	3·1	12·7	15·7	7·2	1·2	8·4	8·8	2·8
Gold mining	16·2	13·6	12·5	5·1	8·2	8·7	7·2	1·2
Other metal mining	54·0	125·8	165·5	115·1	28·7	82·7	90·7	59·1
Other mining	9·4	19·1	22·8	26·0	4·7	10·9	11·0	10·0
Animal food products	14·5	23·8	24·0	21·8	8·2	15·8	14·6	11·0
Vegetable food products	46·9	61·4	70·4	75·9	24·9	39·8	40·1	40·5
Alcoholic beverages	69·5	64·1	69·6	68·6	32·2	42·5	39·6	36·4
Tobacco	11·6	15·5	19·4	29·5	6·6	10·1	10·7	16·1
Textile and textile products	67·8	81·2	75·5	33·5	35·7	53·4	42·4	11·0
Wood and wood products	37·8	85·3	92·3	55·3	19·1	57·0	52·7	27·3
Pulp and paper	138·3	271·0	376·1	259·7	71·4	178·1	208·6	137·6
Chemicals, paints and drugs	57·1	87·1	108·5	97·2	29·9	57·6	60·1	52·9
Petroleum products	41·5	64·2	81·6	97·5	26·5	42·5	44·8	50·2
Rubber	12·4	20·3	26·6	19·9	6·5	13·4	14·7	10·2
Leather	12·8	6·4	2·5	3·2	6·5	4·2	0·2	0·8
Non-metallic mineral products	21·5	51·4	59·9	53·7	10·9	33·8	33·1	27·9
Iron and steel products	37·3	66·9	88·7	79·0	19·7	44·4	49·5	41·1
Primary iron and steel	18·0	60·1	76·8	58·6	10·0	39·6	42·8	30·0
Non-ferrous metal smelting and refining and products	27·8	70·4	72·8	66·0	15·4	46·5	40·6	35·1
Machinery	61·1	160·1	176·2	182·5	30·1	105·9	98·3	94·8
Transportation equipment, except automobiles	20·2	11·6	22·6	40·6	9·0	7·3	12·4	21·5
Automobiles	10·2	94·0	87·9	107·8	5·3	61·6	48·2	54·2
Miscellaneous manufactured products	15·1	16·4	20·4	18·4	7·2	11·0	11·8	9·4
Construction	11·4	50·9	46·1	59·1	5·2	34·7	26·8	31·6
Heat, light and power	35·7	42·7	46·6	49·7	20·2	28·1	25·9	28·5
Transportation, communication and storage	89·6	114·1	171·1	197·6	47·8	74·8	94·8	104·5
Other public utilities	3·0	3·6	11·9	13·4	1·6	2·4	6·8	6·6
Wholesale trade	119·9	203·3	254·2	237·0	60·6	137·8	147·2	126·4
Retail trade	148·8	176·4	171·3	157·3	66·6	120·8	105·3	86·7
Services	38·0	41·3	45·8	57·4	19·7	28·4	27·4	32·8
Chartered banks and insurance companies	28·8	51·9	55·2	68·4	13·5	34·0	32·3	37·4
Other financial institutions	51·6	86·2	99·6	127·6	31·1	59·7	60·3	71·0
Companies not classified	0·3	0·1	0·1	—	0·1	—	—	—
Total Profits, All Corporations	**1,334·7**	**2,255·9**	**2,672·6**	**2,490·3**	**685·9**	**1,497·7**	**1,510·9**	**1,306·2**
Adjustments to National Income Estimates[2]	+120·3	+250·1	+137·4	+59·7	+115·1	+27·3	−129·9	+69·8
Total Profits, National Income Estimates	**1,455·0**	**2,506·0**	**2,810·0**	**2,550·0**	**801·0**	**1,525·0**	**1,381·0**	**1,376·0**

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[1] Newfoundland included from 1950.

[2] Total profits of all corporations shown here differ from those presented in Table **14** which are used for national income purposes. *See* text, p. 1183.

Section 4.—Federal Incorporation of Companies

During the year ended Mar. 31, 1953, 751 Supplementary Letters Patent were granted for variation of corporate powers, changes of name, confirmation of compromises or arrangements with shareholders and for various other purposes. In addition to the companies with share capital, 24 corporations without share capital were granted Letters Patent under Part II of the Companies Act, 1934 (R.S.C. 1952, c. 53). Supplementary Letters Patent were granted to 440 existing companies and to five existing corporations without share capital.

Compilation of the capitalization of the companies incorporated under the Companies Act is no longer available. Figures for 1943-52 are given at p. 1123 of the 1954 Year Book and those for 1900-1942 in previous issues.

CHAPTER XXVI.—CURRENCY AND BANKING; MISCELLANEOUS COMMERCIAL FINANCE

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Note.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—CURRENCY AND BANKING

A historical sketch of currency and banking in Canada appears in the 1938 Year Book, pp. 900-905.

Section 1.—The Bank of Canada

The Bank of Canada was incorporated under the Bank of Canada Act 1934 and commenced operations on Mar. 11, 1935.

The Bank of Canada is Canada's central bank and as such its main function is to regulate the total volume of money and credit. The normal way in which this function is performed is through changes in the cash reserves of the chartered banks. Each chartered bank is required by the Bank Act to maintain, on the average during each calendar month, an amount of cash reserves, in the form of Bank of Canada notes and deposits with the Bank of Canada, equal to not less than 8 p.c. of its Canadian dollar deposit liabilities. (Prior to July 1, 1954, each chartered bank was required to maintain, at all times, cash reserves equal to not less than 5 p.c. of its Canadian dollar deposit liabilities; in practice, the chartered banks normally attempted to maintain a ratio of about 10 p.c.) An increase in cash reserves encourages banks to expand their assets (mainly by purchasing securities and making loans), with a resultant similar increase in their deposit liabilities; a decrease in cash reserves tends to discourage expansion and may result in some contraction. Therefore, by taking steps to alter the volume of cash reserves available to the chartered banks, the Bank of Canada is able to influence the total of chartered bank assets and the total of their Canadian dollar deposit liabilities. The deposit liabilities of the banks, except for those payable to the Government, are, of course, assets of the general public and, together with currency, comprise their most liquid assets. (*See* pp. 1194-1196 for discussion of general public holdings of liquid assets.)

Open market operations in Government of Canada securities constitute the chief means by which the Bank of Canada influences the volume of chartered banks' reserves. When the Bank of Canada purchases a security it issues a cheque in settlement which, after it is cashed at, or deposited with, a chartered bank by the recipient, is in turn deposited by that chartered bank in its account with the Bank of Canada, thereby increasing its cash reserves. Conversely, when the Bank of Canada sells a security, the cheque which it receives in payment is charged against the account of the chartered bank on which it is drawn thus decreasing that bank's cash reserves. Increases or decreases in other assets and liabilities of the Bank of Canada also have an effect on the chartered banks' cash reserves. For example, an increase in the amount of Bank of Canada notes held by the general public tends to reduce the banks' cash reserves.

The Bank of Canada Act was revised in 1936, 1938 and 1954. The major amendments in 1954 (*see also* pp. 1197-98) were the following:—

(1) The Bank of Canada was given the power to vary the minimum cash reserve requirements of the chartered banks between 8 p.c. and 12 p.c. of their Canadian dollar deposit liabilities, provided that the chartered banks are given a minimum period of one month's notice before each increase becomes effective and that any increase is not more than 1 p.c. during any one month. When this legislation became effective on July 1, 1954, the initial requirement was 8 p.c.

(2) Restrictions regarding the maximum amount of Bank of Canada holdings of securities issued or guaranteed by Canada or any province were removed. Prior to July 1, 1954, the Bank's holdings of these securities which did not mature within two years were limited to 50 p.c. of the Bank's outstanding note issue and deposit liabilities and holdings of these securities, which did not mature within 10 years, were limited to an amount equal to five times the paid-up capital and rest fund of the Bank.

(3) Provision was made for one-fifth of the annual profits of the Bank to be appropriated to the rest fund until it reaches $25,000,000. At the same time the provision for the Bank to pay from its profits cumulative dividends of 4½ p.c. per annum on the capital stock was removed. (This means that the Bank's profits, except for allocations to the rest fund, will in future be transferred to the Government in a single payment rather than part in the form of a dividend and the balance in another payment.)

The Bank may make loans or advances for periods not exceeding six months to chartered banks, or to banks to which the Quebec Savings Bank Act applies, on the pledge or hypothecation of certain classes of securities. Loans or advances on the pledge or hypothecation of readily marketable securities issued or guaranteed by Canada or any province may be made to the Government of Canada or the government of any province for periods not exceeding six months. Other loans may be made to the Government of Canada or the government of any province in amounts not exceeding a fixed proportion of such government's revenue; such loans must be repaid before the end of the first quarter after the end of the fiscal year of the borrower. The Bank of Canada is required to make public at all times the minimum rate at which it is prepared to make loans or advances. This rate, known as the Bank Rate, has been 2 p.c. per annum since Oct. 17, 1950.

The Bank has the sole right to issue paper money for circulation in Canada. Details regarding the note issue are given on pp. 1191-92.

The Bank acts as the fiscal agent for the Government of Canada in the payment of interest and principal and generally in respect of the management of the public debt of Canada.

The Bank may buy and sell securities issued or guaranteed by Canada or any province, short-term securities issued by the United Kingdom, treasury bills or other obligations of the United States, and certain classes of short-term commercial paper. The Bank is authorized by the Industrial Development Bank Act to purchase bonds and debentures issued by the Industrial Development Bank. The Bank may buy and sell gold, silver, nickel and bronze coin, and gold and silver bullion, and may also deal in foreign exchange.

The Bank may accept deposits that do not bear interest from the Government of Canada, the government of any province, any chartered bank or any bank to which the Quebec Savings Bank Act applies.

The Bank does not accept deposits from individuals and does not compete with the chartered banks in commercial banking fields.

Section 23 of the Bank of Canada Act provides that the Bank shall maintain a reserve of gold equal to not less than 25 p.c. of its outstanding notes and deposit liabilities. This requirement was suspended in 1940 when, under the terms of the Exchange Fund Order, the Bank's gold holdings were transferred to the Exchange Fund Account to form part of Canada's official gold and United States dollar reserves. The requirement is still in suspension. The Currency, Mint and Exchange Fund Act, passed in 1952, provides that, notwithstanding Section 23 of the Bank of Canada Act, the Bank of Canada is not required to maintain a minimum or fixed ratio of gold or foreign exchange to its liabilities, unless the Governor in Council otherwise prescribes.

The Bank is under the management of a Board of Directors composed of a Governor, a Deputy Governor and twelve directors. The Governor and Deputy Governor are appointed for terms of seven years each by the directors, with the approval of the Governor General in Council. The directors are appointed by the Minister of Finance, with the approval of the Governor General in Council, for terms of three years each. The Deputy Minister of Finance is a member of the Board but does not have the right to vote. There is an Executive Committee of the Board, composed of the Governor, Deputy Governor, one director and the Deputy Minister of Finance (who is without a vote), which has the same powers as the Board, except that its every decision must be submitted to the Board at its next meeting.

In addition to the Deputy Governor, who is a member of the Board, there may be one or more Deputy Governors who are appointed by the Board of Directors to perform such duties as are assigned to them by the Board.

The Governor is the chief executive officer of the Bank and Chairman of the Board of Directors. The Governor has the power to veto any action or decision of the Board of Directors or of the Executive Committee but such a veto is subject to confirmation or disallowance by the Governor General in Council. In the absence of the Governor, the Deputy Governor, who is a member of the Board, exercises all the powers and functions of the Governor.

The capital of the Bank is $5,000,000 and is entirely held by the Minister of Finance. At the end of 1953, the rest fund of the Bank amounted to $10,050,367. The Bank of Canada Act, as amended in 1954, provides that each year 20 p.c. of the Bank's annual profits (after provision for depreciation in assets, pension funds and such matters) shall be allocated to the rest fund until the rest fund reaches an amount five times the paid-up capital of the Bank and the remainder shall be paid to the Receiver-General and placed to the credit of the Consolidated Revenue Fund.

The head office of the Bank is at Ottawa. It has agencies at Halifax, Saint John, Montreal, Ottawa, Toronto, Winnipeg, Regina, Calgary and Vancouver and is represented in St. John's and Charlottetown. The agencies are chiefly concerned with the functions of the Bank as fiscal agent for the Government of Canada and with the issue and redemption of currency. The Industrial Development Bank, which is described on pp. 1190-91, is a subsidiary of the Bank of Canada.

The Bank of Canada Act requires that statements of the assets and liabilities of the Bank on each Wednesday and the last day of each month be published in the *Canada Gazette*. A summary of the statement as at Dec. 31, 1951-53, appears in Table **1**.

1.—Assets and Liabilities of the Bank of Canada, as at Dec. 31, 1951-53

Assets	1951	1952	1953
	$'000,000	$'000,000	$'000,000
Assets			
Foreign exchange	117·9	77·2	55·1
Investments—			
Treasury Bills of Canada	186·4	282·9	374·5
Other securities issued or guaranteed by Canada maturing within 2 years	955·3	1,176·9	1,002·1
Other securities issued or guaranteed by Canada not maturing within 2 years	1,049·3	767·2	893·7
Securities issued or guaranteed by a province of Canada	—	—	—
Bonds and debentures issued by Industrial Development Bank	2·8	5·8	11·3
Other securities	86·3	7·3	12·1
Industrial Development Bank capital stock	25·0	25·0	25·0
Bank premises	5·1	5·1	4·8
All other assets	16·0	34·1	58·7
Totals, Assets	**2,444·1**	**2,381·5**	**2,437·3**

1.—Assets and Liabilities of the Bank of Canada, as at Dec. 31, 1951-53—concluded

Liabilities	1951	1952	1953
	$'000,000	$'000,000	$'000,000
Liabilities			
Capital paid up	5·0	5·0	5·0
Rest fund	10·1	10·1	10·1
Notes in Circulation—			
Held by chartered banks	273·1	272·5	263·8
All other	1,191·1	1,288·7	1,335·3
Deposits—			
Government of Canada	94·9[1]	16·2[1]	51·5[1]
Chartered banks	619·0	626·6	623·9
Other	66·1	44·5	29·5
Foreign currency liabilities	155·6	82·9	63·8
All other liabilities	29·3[1]	34·9[1]	54·2[1]
Totals, Liabilities	**2,444·2**	**2,381·4**	**2,437·1**

[1] Before the transfer of Bank of Canada profits for the year ending Dec. 31 from "All other liabilities" to "Government of Canada deposits".

The Industrial Development Bank.—The Industrial Development Bank, a subsidiary of the Bank of Canada, was incorporated by Act of Parliament during 1944 and its banking operations commenced on Nov. 1, 1944. Its functions are described in the preamble to the Act as follows:—

> "To promote the economic welfare of Canada by increasing the effectiveness of monetary action through ensuring the availability of credit to industrial enterprises which may reasonably be expected to prove successful if a high level of national income and employment is maintained, by supplementing the activities of other lenders and by providing capital assistance to industry with particular consideration to the financing problems of small enterprises."

The President of the Industrial Development Bank is the Governor of the Bank of Canada and the Directors are the Directors of the Bank of Canada. The $25,000,000 capital stock of the Bank (completely paid up) was subscribed by the Bank of Canada. The Industrial Development Bank may also raise funds by the issue of bonds and debentures provided that its total direct liabilities and contingent liabilities in the form of guarantees and underwriting agreements do not exceed three times the aggregate of the Bank's paid-up capital and Reserve Fund.

The lending powers of the Bank may be extended only to industrial enterprises or commercial air services in Canada with respect to which it is empowered to:—

(1) lend money or guarantee loans;
(2) enter into underwriting agreements with regard to any issue of stock, bonds or debentures;
(3) acquire stock, bonds or debentures from the issuing corporation or any person with whom the Bank has entered into an underwriting agreement.

The Bank may accept any form of collateral security against its advances, including real property.

The Industrial Development Bank is intended to supplement the activities of other lending agencies, not to compete with them, and the Act of incorporation requires that it should extend credit only when the Board of Directors is of the opinion that similar credit would not be available elsewhere on reasonable terms and conditions. The Bank is specifically prohibited from engaging in the business of deposit banking.

2.—Authorized and Outstanding Loans and Investments of the Industrial Development Bank, by Province, Size and Industry, as at Dec. 31, 1953

Province	Authorized	Outstanding
	$	$
Newfoundland	—	—
Prince Edward Island	66,000	49,583
Nova Scotia	434,829	315,580
New Brunswick	1,274,221	915,007
Quebec	24,285,543	18,522,929
Ontario	14,313,565	9,157,561
Manitoba	1,968,445	1,101,833
Saskatchewan	3,533,000	3,255,002
Alberta	3,096,200	2,137,199
British Columbia[1]	8,933,191	6,080,050
Canada	**57,904,994**	**41,534,744**

Size of Loan	Authorized	Credits
	$	No.
$5,000 or under	51,192	13
$5,001 to $25,000	3,731,747	240
$25,001 to $50,000	5,814,254	147
$50,001 to $100,000	9,091,036	120
$100,001 to $200,000	9,744,365	66
$200,001 or over	29,472,400	48
Totals	**57,904,994**[2]	**634**

Industry	Authorized	Outstanding
	$	$
Food and beverages	5,478,823	3,528,396
Rubber goods	50,000	45,000
Leather products	727,500	342,805
Textile products (except clothing)	3,774,679	2,880,983
Clothing (textiles and fur)	1,783,250	1,151,525
Wood products	7,850,309	5,732,335
Paper products (including pulp)	4,191,400	3,892,983
Printing, publishing and allied industries	1,129,000	442,791
Iron and steel products (including machinery and equipment)	7,125,690	3,554,634
Transportation equipment	2,687,855	1,788,568
Non-ferrous metal products	476,195	321,596
Electrical apparatus and supplies	2,638,100	1,968,094
Non-metallic mineral products	2,804,881	1,962,420
Petroleum and coal products	2,890,000	2,832,213
Chemical products	8,253,500	7,149,065
Miscellaneous manufacturing industries	1,179,000	767,474
Refrigeration	3,610,812	2,482,132
Generating or distributing electricity	315,000	80,000
Commercial air services	939,000	611,730
Totals	**57,904,994**	**41,534,744**

[1] Includes the Yukon and Northwest Territories. [2] Because of partial repayments on account of current authorizations, the net authorizations were $46,754,639 of which those in excess of $200,000 totalled $24,832,111.

Section 2.—Currency

Subsection 1.—Notes and Coinage

Note Circulation.—The development by which bank notes became the chief circulating medium in Canada prior to 1935 is described in the 1938 Year Book, pp. 900-905. Those features of the development which then became permanent are outlined in the 1941 Year Book, pp. 809-810.

When the Bank of Canada commenced operations in 1935 it assumed liability for Dominion notes outstanding. These were replaced in public circulation and partly replaced in cash reserves by the Bank's legal tender notes in denominations of $1, $2, $5, $10, $20, $50 and $100. Deposits of chartered banks at the Bank of Canada completed the replacement of the old Dominion notes of $1,000 to $50,000 denomination that had previously been used as cash reserves.

The chartered banks were required under the Bank Act of 1934 to reduce gradually the issue of their own bank notes during the years 1935-45 to an amount not in excess of 25 p.c. of their paid-up capital on Mar. 11, 1935. Bank of Canada notes thus replaced chartered bank notes as the issue of the latter was reduced. Further restrictions introduced by the 1944 revisions of the Bank Act cancelled the right of chartered banks to issue or re-issue notes after Jan. 1, 1945, and in January 1950, the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada in return for payment of a like sum to the Bank of Canada.

The classification of Bank of Canada notes in circulation, by denomination, shown in Table **3** for 1950-53 is not strictly comparable with the classification for earlier years. Dominion notes have been excluded from the denomination classification and the total only is shown. Also, an item has been added showing the outstanding chartered bank notes issued originally for circulation in Canada. The statistics of total notes in the hands of the general public are comparable with earlier years.

3.—Bank of Canada Notes, by Denomination, and Other Notes in Circulation, 1950-53

Note.—Annual averages of month-end figures. The totals outstanding are not always multiples of the denominations of notes because of adjustments made according to scale when parts of mutilated notes are turned in for cancellation.

Denomination	1950	1951	1952	1953
	$	$	$	$
$1	45,910,769	48,809,962	51,641,466	54,900,023
$2	34,243,030	35,911,842	37,927,230	39,714,720
$5	103,833,274	107,085,457	110,816,640	113,757,244
$10	404,655,684	422,317,512	441,728,407	456,770,149
$20	323,572,326	353,237,484	392,511,009	424,196,391
$25	46,614	46,565	46,515	46,442
$50	104,392,817	108,221,783	114,672,846	121,898,817
$100	244,904,066	258,018,267	273,053,869	293,553,271
$500	170,875	139,583	112,038	95,375
$1,000	13,735,750	10,183,083	9,528,692	9,947,333
Totals	1,275,465,205	1,343,971,538	1,432,038,712	1,514,879,765
Provincial notes	27,568	27,568	27,568	27,568
Dominion notes	4,713,347	4,696,543	4,675,772	4,666,763
Defunct bank notes	88,429	88,380	88,364	88,362
Chartered bank notes[1]	12,944,361	11,895,393	11,108,797	10,439,689
Grand Totals	**1,293,238,910**	**1,360,679,422**	**1,447,939,213**	**1,530,102,147**

[1] In January 1950, the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada.

4.—Annual Averages of Note Circulation in the Hands of the Public, 1944-53

Note.—Newfoundland has long used Canadian bank notes so that when that Province united with Canada in 1949 no adjustment was necessary in the circulation figures, but the effect of including the population of Newfoundland from 1949 was to reduce the per capita note circulation by an estimated $1. Figures for the years 1926-43, comparable to those shown below, are given in the 1946 Year Book, p. 959.

Year	Annual Averages of Month-End Figures			Annual Averages of Daily Figures	
	Bank of Canada Notes[1]	Chartered Bank Notes[2]	Total	Amount[3]	Per Capita[4]
	$	$	$	$	$
1944	821,330,660	37,056,187	858,386,847	835,000,000	69·90
1945	940,911,000	28,636,174	969,547,174	951,000,000	78·78
1946	981,727,494	23,172,717	1,004,900,211	992,000,000	80·70
1947	1,009,112,506	19,675,994	1,028,788,500	1,013,000,000	80·71
1948	1,055,587,720	17,109,071	1,072,696,791	1,053,000,000	82·12
1949	1,086,744,068	14,731,992	1,101,476,060	1,087,000,000	80·84
1950	1,100,898,470	[5]	1,100,898,470	1,085,000,000	79·13
1951	1,151,201,531	[5]	1,151,201,531	1,132,000,000	80·81
1952	1,227,449,385	[5]	1,227,449,385	1,207,000,000	83·65
1953	1,298,894,876	[5]	1,298,894,876	1,275,000,000	86·26

[1] Total issue less notes held by chartered banks. [2] Gross note circulation only; notes held by other chartered banks are not available. Includes, prior to 1950, a relatively small amount issued for circulation outside Canada. [3] Figures, to nearest million, supplied by the Bank of Canada. [4] Figures based on estimates of population as given at p. 137; *see* headnote to this table. [5] In January 1950, the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada.

Coinage.—Under the Currency, Mint and Exchange Fund Act (R.S.C. 1952, c. 315), gold coins may be issued in denominations of twenty dollars, ten dollars and five dollars (nine-tenths fine or millesimal fineness, 900). Subsidiary coins include: silver coins in denominations of one dollar, 50 cents, 25 cents and 10 cents (eight-tenths fine or millesimal fineness, 800); pure nickel five-cent coins; and bronze (copper, tin and zinc) one-cent coins. Provision is made for the temporary alteration of composition in event of a shortage of prescribed metals. A tender of payment of money in coins is a legal tender in the case of gold coins for the payment of any amount; in the case of silver coins for the payment of an amount up to $10; nickel coins for payment up to $5; and bronze coins up to 25 cents.

5.—Canadian Coin in Circulation, as at Dec. 31, 1944-53

Note.—The figures shown are of net issues of coin. Figures for 1901-25 are given in the 1927-28 Year Book, pp. 857-858, and for 1926-43 in the 1946 edition, p. 956.

Year	Silver	Nickel	Tombac[1]	Steel	Bronze	Total	Per Capita[2]
	$	$	$	$	$	$	$
1944	54,972,812	4,825,057	1,407,754	571,000	6,753,329	68,529,952	5·74
1945	58,327,590	4,823,237	1,407,462	1,521,170	7,499,263	73,578,722	6·09
1946	59,944,549	5,113,103	1,155,791	1,520,849	8,024,547	75,758,839	6·16
1947	61,049,986	5,503,117	868,994	1,520,647	8,382,327	77,325,071	6·16
1948	63,829,640	6,117,555	730,064	1,520,210	9,088,221	81,285,690	6·34
1949	67,874,750	6,753,780	661,333	1,519,743	9,407,325	86,216,931	6·41
1950	73,473,724	7,393,138	621,440	1,519,419	10,012,143	93,019,864	6·78
1951	78,638,143	7,815,103	599,655	1,701,849	10,794,169	99,548,919	7·11
1952	83,463,939	7,814,398	584,882	2,278,329	11,476,591	105,618,139	7·32
1953	89,550,236	7,813,081	570,847	3,109,691	12,130,181	113,174,036	7·66

[1] Tombac, a copper-zinc alloy, was used to conserve nickel for war purposes. [2] Per capita figures are based on estimates of population as given at p. 137.

The Royal Canadian Mint.—The Mint at Ottawa was established as a branch of the Royal Mint under the (Imperial) Coinage Act, 1870, and opened on Jan. 2, 1908. In 1931 (21-22 Geo. V, c. 48) it was constituted a branch of the Canadian Department of Finance and has since operated as the Royal Canadian Mint. From 1858 the British North American provinces, and later Canada, obtained their coins from the Royal Mint at London or from The Mint, Birmingham. Before that date, coins were mainly British, United States and Spanish. In its earlier years the operations of the Mint in Canada were confined to the production of gold, silver and bronze coins for domestic circulation and of British sovereigns and small coins struck under contract for Newfoundland and Jamaica.

Before 1914, only small quantities of gold bullion were refined, but during World War I the Mint came to the assistance of the British Government by establishing a refinery in which nearly 20,000,000 oz. t. of South African gold were treated on account of the Bank of England. The subsequent development of the gold-mining industry in Canada has resulted in gold-refining becoming one of the principal activities of the Mint. Fine gold produced from the rough bullion shipments received from the mines is purchased by the Mint and later delivered to the Bank of Canada for account of the Minister of Finance in bars of approximately 400 oz. t. each, or, for those mines authorized to sell gold in the open market, the bullion is shipped to various domestic and foreign processors. The fine silver extracted from the rough gold is generally used for coinage purposes.

6.—Annual Receipts of Gold Bullion at the Royal Canadian Mint, and Bullion and Coinage Issued, 1944-53

NOTE.—Figures for 1926-43 are given in the 1946 Year Book, p. 957.

Year	Gold Received	Gold Bullion Issued	Silver Coin Issued	Nickel Coin Issued	Steel Coin Issued	Tombac[1] Coin Issued	Bronze Coin Issued
	oz. t.	oz. t.	$	$	$	$	$
1944	2,862,048	2,829,755	4,006,000	—	571,000	400	454,600
1945	2,503,416	2,499,163	3,416,300	—	950,300	—	748,500
1946	2,652,245	2,665,964	1,710,000	291,500	—	—	528,500
1947	2,868,469	2,859,084	1,186,000	391,000	—	—	360,300
1948	3,401,991	3,405,073	2,829,956	615,500	—	—	708,300
1949	3,925,618	3,865,296	4,148,842	637,500	—	—	321,901
1950	4,422,968	4,347,961	5,641,805	640,510	—	—	607,003
1951	4,169,480	4,167,485	5,213,677	423,003	182,829	—	783,329
1952	3,953,158	4,031,063	4,869,552	597	576,965	—	683,820
1953	3,684,074	3,626,497	6,138,686	234	831,915	—	655,130

[1] *See* footnote 1, Table 5.

Subsection 2.—General Public Holdings of Certain Liquid Assets

The Bank of Canada's presentation of statistics concerning the volume of money is shown in Table 7. This shows not only currency and active bank deposits (formerly referred to as "money supply"), but also inactive chartered bank deposits and Government of Canada securities which, although not used to make payments, are forms in which the public holds its liquid funds. The series has been carried back to 1944 and provides a good approach to the problem of measuring changes in the volume of money under present-day conditions.

7.—General Public Holdings of Certain Liquid Assets, as at Dec. 31, 1944-53

(Millions of dollars)

Year	Currency and Active Bank Deposits	Inactive Chartered Bank Notice Deposits[1]	Government of Canada Securities[2]	Total
1944	3,153	2,060	9,131	14,344
1945	3,514	2,391	11,310	17,215
1946	3,996	2,856	11,175	18,027
1947	3,944	3,143	10,763	17,850
1948	4,335	3,408	10,249	17,992
1949	4,422	3,751	9,902	18,075
1950	4,851	3,861	10,066	18,778
1951	4,843	3,894	9,388	18,125
1952	5,173	4,129	9,062	18,364
1953	5,134	4,211	9,284	18,629

[1] Estimated aggregate minimum quarterly balances in chartered bank personal savings deposits in Canada plus non-personal notice deposits in Canada.

[2] Holdings of all investors, other than the Bank of Canada, chartered banks and Government of Canada accounts. Includes direct and guaranteed securities (including refundable taxes) at par. Direct debt includes both matured and unmatured issues outstanding, exclusive of sinking fund holdings; guaranteed debt is included on the basis of total unmatured issues outstanding; Newfoundland debt assumed by the Government of Canada has been included since June 1949. Foreign pay securities have been valued at official mid-rates of exchange to Sept. 30, 1950, and at market rates thereafter.

In measuring currency and active bank deposits, it is necessary to decide which categories of bank deposits should be classed as active and which, by their nature, should be regarded more appropriately as part of the public's other liquid asset holdings. Generally, it has been satisfactory to classify bank deposits as active if cheques may be drawn against them. In other countries this criterion has seemed to work fairly well because cheques may not be drawn against savings deposits. In Canada, however, cheques are, in practice, drawn freely against savings deposits and this poses an awkward problem. To omit all savings deposits of chartered banks would ignore the obvious fact that, for many people, a savings account is an active chequing account which is very similar to a current deposit. On the other hand it is known from available information that, of the total amount on deposit in savings accounts in Canada, much the larger part is, in practice, inactive. Chartered banks pay interest on the minimum quarterly balances in personal savings accounts, i.e., on the sum that has been left undisturbed for the quarterly period; from the amount of interest that is actually paid on this basis as compared with the nominal rate of interest, it is apparent that the aggregate minimum quarterly balances in personal savings accounts are, at present, about five-sixths of the total of such deposits.

It is felt, therefore, that a more realistic account of monetary developments in Canada—and one more comparable with the usual presentation of similar statistics in other countries—is obtained by omitting the minimum quarterly balances in personal savings deposits and non-personal notice deposits from active money statistics. It has seemed preferable to exclude these deposits on the basis that they are inactive in practice rather than to include them on the grounds that they are potentially active because cheques may be issued against them.

The published returns of Canadian chartered banks include among assets "Cheques on Other Banks" which represents the amount of cheques that have been credited to the deposit account of the payee but not yet cleared against the deposit account of the drawer. To the extent of such items in 'float' there is, therefore, duplication in the figures of bank deposits. In Table 8, "Cheques on Other Banks" has been deducted from the figure of chartered bank deposits in order to eliminate this duplication.

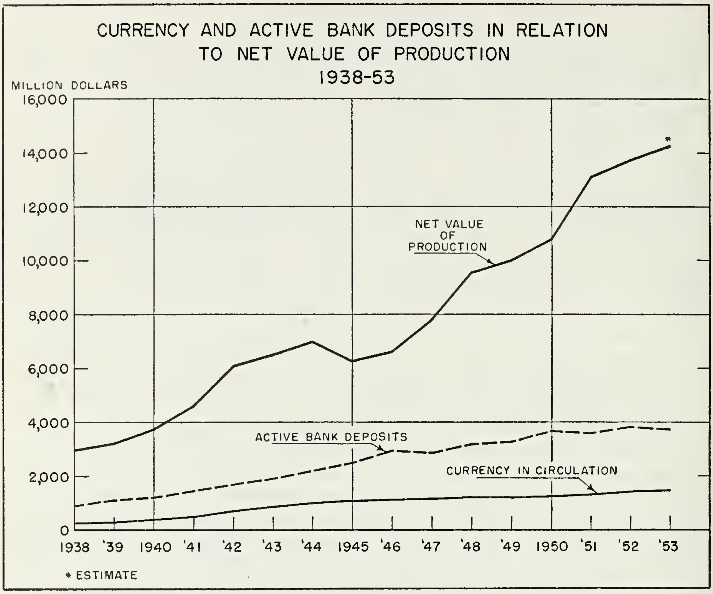
Government deposits are given different treatment in different countries as far as volume-of-money statistics are concerned. In general, the commonly used figure of bank deposits excludes Government deposits and, on the whole, it appears preferable to exclude Government of Canada deposits from the Canadian active money figures.

8.—Summary Statistics of Currency and Active Bank Deposits, as at Dec. 31, 1944-53

(Millions of dollars)

Year	Currency Outside Banks[1]			Active Bank Deposits			Total Currency and Active Bank Deposits
	Notes	Coin	Total Currency	Chartered Bank Net[2]	Bank of Canada 'Other' Deposits[3]	Total Active Bank Deposits	
1944	930	60	990	2,135	28	2,163	3,153
1945	992	63	1,055	2,429	30	2,459	3,514
1946	1,031	65	1,096	2,806	94	2.900	3,996
1947	1,046	66	1,112	2,764	68	2,832	3,944
1948	1,115	70	1,185	3,069	81	3,150	4,335
1949	1,110	74	1,184	3,111	127	3,238	4,422
1950	1,136	78	1,214	3,430	207	3,637	4,851
1951	1,191	84	1,275	3,502	66	3,568	4,843
1952	1,289	88	1,377	3,751	45	3,796	5,173
1953	1,335	94	1,429	3,675	30	3,705	5,134

[1] Note circulation excluding notes held by chartered banks together with total coin issued by the Mint, less coin held by the banks. [2] Demand and notice deposits, deposits of Provincial Governments, United Kingdom and foreign banks; less 'float' deposits, that is, cheques on banks as shown in month-end returns. [3] Excludes Government of Canada, chartered bank and foreign deposits.



Section 3.—Commercial Banking

As one of the chief functions of the early banks in Canada was to issue notes to provide a convenient currency or circulating medium, it has been expedient to cover both currency and banking in one historical sketch, which is given in the 1938 Year Book, pp. 900-905. A list of the banks at Confederation appears in the 1940 Year Book, p. 897, and bank absorptions since 1867 are given in the 1941 edition, pp. 812-813. A table in the 1937 Year Book, pp. 894-895, shows the insolvencies from Confederation; the last insolvency occurred in 1923. The more important of the revisions to banking legislation contained in the 1954 Bank Act are outlined in Subsection 1.

Subsection 1.—Chartered Banks

Canadian commercial banks are chartered or licensed by the Government of Canada and operate under one federal statute—the Bank Act—which is revised every ten years and brought into line with changing economic conditions. In addition to doing a commercial banking business, the chartered banks hold most of the public's savings deposits.

Revisions in Banking Legislation in 1954.—In 1954 there were a number of important changes in legislation affecting the operations of the chartered banks, arising out of the decennial revision of the Bank Act and revisions of the Bank of Canada Act and the National Housing Act.

An amendment to the Bank Act concerned the minimum cash reserves which the chartered banks are required to hold in the form of notes of and deposits with the Bank of Canada. The banks had been required to maintain at all times cash reserves of not less than 5 p.c. of their Canadian dollar deposit liabilities. In practice, they normally attempted to maintain a ratio of about 10 p.c. As a result of the amendment, the banks are now required to maintain cash reserves, on the average during each calendar month, equal to not less than 8 p.c. of their Canadian dollar deposit liabilities. In conjunction with this change, an amendment was made to the Bank of Canada Act which gives the Bank of Canada power to vary the minimum cash reserve requirement between 8 p.c. and 12 p.c. of Canadian dollar deposit liabilities, provided that the chartered banks are given a minimum period of one month's notice before each increase becomes effective and that the increase effective in any one month is not more than 1 p.c.

The National Housing Act 1954 gives the chartered banks authority to lend money for residential construction on the security of mortgages insured by a government agency. Prior to 1954, the Bank Act had prohibited the chartered banks from lending money on the security of mortgages on real or immovable property, except for loans made under the terms of the Farm Improvements Loans Act of 1944 and the Veterans Business and Professional Loans Act of 1946.

Another amendment to the Bank Act allows the banks to lend money to individuals, other than manufacturers or dealers, on the security of motor-vehicles or any other personal or movable household property.

With the development of the Canadian oil industry, a new section has been added to the Bank Act which allows oil loans to be made on various types of security, including oil in the ground.

The amount of capital which a newly-incorporated bank must have before it commences business has been doubled. The requirements are now a minimum subscribed capital of $1,000,000 and a minimum paid-up capital of $500,000. The previous requirements had been in effect since 1890.

Another amendment to the Bank Act was related to the problem of raising new capital. Under the provisions of the old Act there were difficulties attached to making a new issue of capital stock if the bank concerned had shareholders resident in countries where considerable detailed information (which banks are not required to make public in Canada) must be filed before the issue of capital stock is approved. The amendment relieves banks of the obligation to make offerings to shareholders resident in such countries.

After 1935, the chartered banks' note circulation in Canada was gradually withdrawn and, in July 1950, the banks paid to the Bank of Canada approximately $13,500,000, an amount equal to their outstanding Canadian notes, and, thereafter, the Bank of Canada became liable to redeem the notes on presentation. Some of the banks with foreign branches have continued to maintain a small issue of foreign currency notes but the costs, including taxes, have made it an unprofitable operation. The Bank Act now provides that all note-issuing privileges of the banks shall cease and also provides for methods of retiring the outstanding foreign note circulation

With the above-mentioned payment by the chartered banks to the Bank of Canada, the additional liability, often referred to as the "double liability", which formerly attached to a bank's shares in proportion to its outstanding note issue, was cancelled. When there was additional liability attached to the bank's shares it was essential that the shares could be transferred only by registration on the books of the bank. As this is no longer necessary, an amendment to the Bank Act provides that each bank, if it so wishes, may provide for another method of share transfer.

Branches of Chartered Banks.—Although there are fewer chartered banks now than at the beginning of the century, there has been a great increase in the number of branch banking offices. Owing mainly to amalgamations, the number of banks declined from 34 in 1901 to 10 in 1931, and remained at that figure until the incorporation of a new bank—the Mercantile Bank of Canada—in 1953 brought the total to 11.* The number of chartered bank branches in Canada increased from 747 at Dec. 31, 1902, to 3,932 at the end of 1953.

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* The Bank of Toronto and the Dominion Bank amalgamated Feb. 1, 1955, to become the Toronto-Dominion Bank.

9.—Branches of Chartered Banks by Province, as at Dec. 31, for Certain Years 1868-1953

NOTE.—Figures for 1920 and subsequent years include sub-agencies in Canada receiving deposits for the banks employing them.

Province or Territory	1868	1902	1905	1920	1926	1930	1940	1943	1946	1950	1951	1952	1953
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Newfoundland...	...	...	...	...	...	...	...	...	...	39	40	42	45
P. E. Island.....	—	9	10	41	28	28	25	23	23	23	23	23	23
Nova Scotia.....	5	89	101	169	134	138	134	126	127	144	147	148	149
New Brunswick..	4	35	49	121	101	102	97	93	96	100	101	101	107
Quebec..........	12	137	196	1,150	1,072	1,183	1,083	1,041	1,067	1,164	1,184	1,211	1,230
Ontario..........	100	349	549	1,586	1,326	1,409	1,208	1,092	1,117	1,257	1,304	1,315	1,350
Manitoba........	—	52	95	349	224	239	162	148	151	165	168	174	175
Saskatchewan....	—	30	87	591	427	447	233	213	226	238	240	243	247
Alberta..........				424	269	304	172	163	190	246	257	264	270
British Columbia	2	46	55	242	186	229	192	180	216	294	304	318	328
Yukon and N.W.T........	—	—	3	3	3	4	5	5	6	9	8	9	8
Canada.........	**123**	**747**	**1,145**	**4,676**	**3,770**	**4,083**	**3,311**	**3,084**	**3,219**	**3,679**	**3,776**	**3,848**	**3,932**

10.—Branches of Individual Canadian Chartered Banks, by Province, as at Dec. 31, 1953

NOTE.—This table does not include 696 sub-agencies in Canada for receiving deposits.

Chartered Banks	N'f'ld.	P.E.I.	N.S.	N.B.	Que.	Ont.
	No.	No.	No.	No.	No.	No.
Bank of Montreal......................	9	1	16	14	115	193
Bank of Nova Scotia..................	18	8	41	36	31	145
Bank of Toronto[1]......................	—	—	1	—	25	138
Provincial Bank of Canada............	—	1	—	11	124	12
Canadian Bank of Commerce...........	4	6	20	9	75	257
Royal Bank of Canada.................	9	4	63	22	93	232
Dominion Bank[1]	—	—	1	3	16	120
Banque Canadienne Nationale..........	—	—	—	—	232	12
Imperial Bank of Canada...............	—	—	1	1	13	129
Barclays Bank (Canada)................	—	—	—	—	2	1
Mercantile Bank of Canada............	—	—	—	—	1	—
Totals.........................	**40**	**20**	**143**	**96**	**727**	**1,239**

For footnote, *see* end of table.

10.—Branches of Individual Canadian Chartered Banks, by Province, as at Dec. 31, 1953—concluded

Chartered Banks	Man.	Sask.	Alta.	B.C.	Yukon and N.W.T.	Total
	No.	No.	No.	No.	No.	No.
Bank of Montreal	28	35	51	70	2	534
Bank of Nova Scotia	9	24	29	37	—	378
Bank of Toronto[1]	15	25	17	18	—	239
Provincial Bank of Canada	—	—	—	—	—	148
Canadian Bank of Commerce	37	48	57	80	3	596
Royal Bank of Canada	58	75	55	66	2	679
Dominion Bank[1]	14	5	11	11	—	181
Banque Canadienne Nationale	4	—	—	—	—	248
Imperial Bank of Canada	9	25	31	18	1	228
Barclays Bank (Canada)	—	—	—	1	—	4
Mercantile Bank of Canada	—	—	—	—	—	1
Totals	**174**	**237**	**251**	**301**	**8**	**3,236**

[1] The Bank of Toronto and the Dominion Bank amalgamated Feb. 1, 1955, to become the Toronto-Dominion Bank.

11.—Branches of Individual Canadian Chartered Banks outside Canada, with their Locations, as at Dec. 31, 1952 and 1953

Note.—This table does not include seven sub-agencies operating outside Canada.

Bank and Location	1952	1953	Bank and Location	1952	1953
	No.	No.		No.	No.
Bank of Montreal—			Royal Bank of Canada—		
United Kingdom	2	2	United Kingdom	2	2
United States	2	2	British West Indies	12	13
			United States	1	1
			Cuba	18	18
Bank of Nova Scotia—			Puerto Rico	3	3
United Kingdom	1	1	Central and South America	20	22
British West Indies	14	14	Haiti Dominican Republic	6	6
Dominican Republic	1	1			
United States	1	1	France	1	1
Cuba	7	7			
Puerto Rico	3	3	Dominion Bank—		
			United Kingdom	1	1
			United States	1	1
Canadian Bank of Commerce—			Banque Canadienne Nationale—		
United Kingdom	1	1	France	1	1
British West Indies	3	3			
United States	5	5	**Totals**	**106**	**109**

Combined Financial Statistics of Chartered Banks.—In order to afford a clear account of the nature of banking transactions in Canada, bank liabilities have been classified in Table 12 into two main groups: liabilities to shareholders and liabilities to the public. Only the latter group is ordinarily considered when determining the financial position of any such institution. Assets are divided into four groups, 'other assets' being included in the total. The relative rates of increase of capital and reserve funds may be noted in the table, also the great increase in the proportion of liabilities to the public to total liabilities and the gradually increasing percentage of liabilities to the public to total assets. The declining proportion of chartered bank notes in circulation to total liabilities to the public is also characteristic of the evolution of banking in recent times (*see* p. 1191).

12.—Assets and Liabilities of the Chartered Banks, 1944-53

Note.—These statistics are yearly averages computed from the twelve monthly returns in each year Figures for 1867–1936 will be found in the 1938 Year Book, pp. 918–919, and for 1937–43 in the 1952–53 edition, p. 1105.

Year	ASSETS						Public Liabilities to Total Assets
	Gold Reserves, Notes of and Deposits with the Bank of Canada	Government of Canada and Provincial Government Securities	Municipal Securities in Canada and Public Securities Elsewhere	Total Securities	Total Loans	Total Assets[1]	
	$	$	$	$	$	$	p.c.
1944...	538,206,187	2,991,047,582	283,417,399	3,353,259,736	1,343,938,364	5,990,410,887	94·98
1945...	604,842,928	3,438,830,751	313,061,291	3,857,534,890	1,505,039,333	6,743,217,134	95·48
1946...	686,368,427	3,734,872,237	381,996,554	4,287,002,710	1,642,519,066	7,429,608,029	95·89
1947...	679,051,569	3,395,306,552	436,075,580	4,108,441,158	2,125,582,441	7,810,913,975	95·72
1948...	719,499,043	3,314,539,556	393,841,399	4,120,137,032	2,388,597,680	8,140,145,708	95·81
1949...	762,901,802	3,573,294,569	387,844,005	4,370,052,504	2,618,421,119	8,657,764,277	95·99
1950...	769,951,696	3,563,018,724	402,235,668	4,363,401,201	2,872,411,227	9,015,109,852	96·06
1951...	799,304,753	3,134,186,339	384,481,994	3,930,581,704	3,495,723,921	9,384,800,263	96·11
1952...	850,995,055	3,271,073,120	416,556,385	4,070,324,029	3,607,883,433	9,760,480,522	96·14
1953...	885,714,106	3,172,572,295	404,852,995	3,942,016,950	4,215,121,224	10,334,778,308	96·23

Year	LIABILITIES						
	Liabilities to Shareholders		Liabilities to the Public				
	Capital	Rest or Reserve Fund	Notes in Circulation	Demand Deposits in Canada	Notice Deposits in Canada	Total on Deposit[2]	Total Public Liabilities[3]
	$	$	$	$	$	$	$
1944...	145,500,000	136,750,000	37,056,187	1,863,793,981	2,272,573,361	5,422,302,978	5,689,443,095
1945...	145,500,000	136,750,000	28,636,174	1,986,075,142	2,750,358,254	6,159,997,976	6,438,617,676
1946...	145,500,000	144,666,667	23,172,717	2,155,312,749	3,327,057,442	6,771,555,153	7,123,979,417
1947...	145,500,000	178,000,000	19,675,994	2,138,771,178	3,681,231,057	7,075,355,884	7,476,627,449
1948...	145,500,000	182,416,667	17,109,071	2,258,658,693	3,972,159,586	7,402,776,952	7,798,910,335
1949...	145,500,000	187,000,000	14,731,992	2,353,033,907	4,333,888,999	7,921,694,763	8,310,215,001
1950...	145,500,000	200,000,000	424,043[4]	2,562,813,591	4,547,880,387	8,220,886,332	8,660,173,804
1951...	146,502,115	200,837,564	279,630[4]	2,711,524,845	4,592,929,318	8,464,510,837	9,019,780,755
1952...	148,522,618	211,798,615	180,369[4]	2,931,558,298	4,811,471,906	8,899,236,252	9,384,111,788
1953...	149,954,371	228,095,099	141,950[4]	3,081,380,359	5,098,833,001	9,482,574,676	9,945,599,866

[1] Includes other assets not specified. [2] Includes deposits of Federal and Provincial Governments and also deposits elsewhere than in Canada. [3] Includes other liabilities not specified. [4] After January 1950, the chartered banks' liability for such notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada; these figures cover notes in circulation outside Canada which were not taken over by the Bank of Canada.

13.—Analysis of Assets of Chartered Banks, 1951-53

Note.—The statistics in this table are averages computed from the twelve monthly returns in each year.

Assets	1951	1952	1953
	$	$	$
Cash reserves[1] against Canadian deposits	782,564,265	833,332,674	866,645,535
Subsidiary coin	14,567,622	15,994,769	17,411,039
Notes of other Canadian banks	471,665,967[2]	562,336,604[2]	631,089,806[2]
Deposits at other Canadian banks	877,118	313,582	324,826
Gold and coin abroad	2,172,866	1,667,612	1,657,532
Foreign currencies	40,333,387	38,764,903	40,954,488
Deposits at United Kingdom banks	22,569,857	18,301,927	19,845,421
Deposits at foreign banks	237,614,233	259,198,723	269,020,984

For footnotes, *see* end of table.

13.—Analysis of Assets of Chartered Banks, 1951-53—concluded

Assets	1951	1952	1953
	$	$	$
Securities—			
Federal and Provincial Government securities	3,134,186,339	3,271,073,120	3,172,572,295
Other Canadian and foreign public securities	384,481,994	416,556,385	404,852,995
Other bonds, debentures and stocks	411,913,371	382,694,524	364,591,660
Call and Short Loans—			
In Canada	98,103,643	128,478,786	137,292,002
Elsewhere	107,849,379	132,534,268	191,205,576
Current Loans—			
Canada—			
Loans to Provincial Governments	34,723,105	18,862,541	7,053,287
Loans to cities, towns, municipalities and school districts	113,707,104	112,732,282	111,434,534
Other current loans and discounts	2,867,753,460	2,942,485,180	3,503,338,196
Elsewhere than in Canada	272,180,790	271,281,371	263,320,455
Non-current loans	1,406,440	1,509,005	1,477,174
Other Assets—			
Real estate, other than bank premises	156,372	109,269	103,792
Mortgages on real estate sold by the banks	417,479	390,850	410,963
Bank premises	116,185,897	125,138,049	124,004,274
Bank circulation redemption fund	—	—	—
Liabilities of customers under letters of credit as *per contra*	255,207,737	208,972,300	186,300,098
All other assets	14,161,838	17,751,798	19,871,376
Totals, Assets	**9,384,800,263**	**9,760,480,522**	**10,334,778,308**

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[1] Cash reserves include Bank of Canada notes in the possession of the chartered banks together with their deposits with the Bank of Canada, but exclude minor amounts of gold carried in such reserves.
[2] Includes cheques of other banks.

14.—Analysis of Liabilities of Chartered Banks, 1951-53

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year.

Liabilities	1951	1952	1953
	$	$	$
LIABILITIES TO THE PUBLIC			
Notes in circulation	279,630[1]	180,369[1]	141,950[1]
Deposit Liabilities—			
Government Deposits—			
Federal	229,123,262	141,069,925	225,664,042
Provincial	170,266,769	191,521,145	185,756,182
Public Deposits—			
Demand	2,711,524,845	2,931,558,298	3,081,380,359
Notice	4,592,929,318	4,811,471,906	5,098,833,001
Other[2]	99,007,261	133,447,802	164,331,904
Foreign	661,659,382	690,167,176	726,609,188
Inter-Bank Deposits—			
Canadian	117,943,058	119,361,485	132,448,241
United Kingdom	45,176,237	43,345,413	34,625,735
Other	127,526,578	105,212,030	101,018,797
Totals, Deposit Liabilities[3]	8,755,156,710	9,167,155,180	9,750,667,449
Canadian currency (estimated)	*7,851,000,000*	*8,238,000,000*	*8,785,000,000*
Foreign currency (estimated)	*904,000,000*	*929,000,000*	*966,000,000*
Totals, Note and Deposit Liabilities	8,755,436,340	9,167,335,549	9,750,809,399

For footnotes, *see* end of table.

14.—Analysis of Liabilities of Chartered Banks, 1951-53—concluded

Liabilities	1951	1952	1953
	$	$	$
Other Liabilities to the Public—			
Letters of credit outstanding	255,207,737	208,972,300	186,300.098
Liabilities not included under foregoing headings	9,136,678	7,803,939	8,490,369
TOTALS, LIABILITIES TO THE PUBLIC	9,019,780,755	9,384,111,788	9,945,599,866
LIABILITIES TO SHAREHOLDERS			
Capital	146,502,115	148,522,618	149,954,371
Rest or reserve fund	200,837,564	211,798,615	228,095,099
Grand Totals, Liabilities	**9,367,120,434**	**9,744,433,021**	**10,323,649,336**

[1] After January 1950, the chartered banks' liability for such notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada; these figures cover notes in circulation outside Canada which were not taken over by the Bank of Canada. [2] Deposits in currencies other than Canadian are expressed in Canadian dollars at current rate of exchange. [3] Totals do not correspond with those in Table 12 because of the inclusion here of inter-bank deposits.

15.—Significant Ratio Comparisons of Assets and Liabilities of Chartered Banks, 1944-53

NOTE.—Yearly averages of month-end figures, except where otherwise specified. Figures for the years 1926-43 are given in the 1946 Year Book, p. 966.

Year	Canadian Cash to Canadian Deposits		Securities to Note and Deposit Liabilities	Loans to Note and Deposit Liabilities
	Daily[1]	Month-End		
	p.c.	p.c.	p.c.	p.c.
1944	11·8	11·2	60·2	24·1
1945	11·4	11·0	61·2	23·9
1946	11·4	11·2	61·8	23·7
1947	10·8	10·6	56·6	29·3
1948	10·9	10·6	54·3	31·5
1949	10·4	10·3	53·8	32·2
1950	10·1	9·9	51·6	34·0
1951	10·2	10·0	44·9	39·9
1952	10·4	10·3	44·4	39·4
1953	10·2	10·1	40·4	43·2

[1] Figures supplied by the Bank of Canada.

16.—Deposits in Chartered Banks, according to Size and Currency, as at Sept. 30, 1952 and 1953

Year and Class	Deposit Accounts (Canadian Currency)	Deposits in Canadian Currency	Deposit Accounts (Other than Canadian Currency)	Deposits in Currencies other than Canadian
	No.	$	No.	$
1952				
Deposits Payable on Demand—				
$1,000 or less	873,472	197,178,682	3,543	1,118,995
$1,000 to $5,000	183,074	405,335,460	1,157	2,753,001
$5.000 to $25,000	56,835	578,690.094	769	9,075.987
$25.000 to $100,000	11,879	550.924,973	353	19,471,251
Over $100,000	3,979	1,470.506,292	204	108,157,848
Adjustment items[1]	...	−176,678,833	...	+14,953,548
Totals	1,129,239	3,025,956,668	6,026	155,530,630

[1] Represents certified cheques, interest accrued on interest-bearing accounts, items in transit, etc.

16.—Deposits in Chartered Banks, according to Size and Currency, as at Sept. 30, 1952 and 1953—concluded

Year and Class	Deposit Accounts (Canadian Currency)	Deposits in Canadian Currency	Deposit Accounts (Other than Canadian Currency)	Deposits in Currencies other than Canadian
	No.	$	No.	$
1952—concluded				
Deposits Payable After Notice—				
$1,000 or less	6,665,742	1,091,495,949	90	18,804
$1,000 to $5,000	880,546	1,866,287,102	20	45,845
$5,000 to $25,000	145,925	1,223,356,827	3	38,799
$25,000 to $100,000	6,911	295,333,488	3	149,063
Over $100,000	1,090	414,990,694	2	457,499
Adjustment items[1]	...	+9,416,256	...	+54
Totals	7,700,214	4,900,880,316	118	710,064
1953				
Deposits Payable on Demand—				
$1,000 or less	910.804	208,308,225	4,057	1,177,479
$1,000 to $5,000	194,874	431,609,988	1,373	3,352,030
$5,000 to $25,000	60,423	608,360,263	859	10,212,608
$25.000 to $100,000	12,632	582,997,967	391	19,241,395
Over $100,000	4,044	1,525,690,544	205	89,796,974
Adjustment items[1]	...	−207,086,786	...	+14,926,445
Totals	1,182,777	3,149,880,201	6,885	138,706,931
Deposits Payable After Notice—				
$1, 000 or less	6,893,696	1,139,857,954	121	25,938
$1, 000 to $5,000	956,721	2,036,745.417	36	76.338
$5, 000 to $25,000	163,508	1,369,950,629	13	122,094
$25,000 to $100,000	7,334	311,339,974	3	167,590
Over $100,000	1,091	357,514,378	9	4,539,199
Adjustment items[1]	...	+10,579,494	...	14,533
Totals	8,022,350	5,225,987,846	182	4,945,692

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[1] Represents certified cheques, interest accrued on interest-bearing accounts, items in transit, etc.

17.—Loans of Chartered Banks, according to Class, Outstanding at Sept. 30, 1951-53

NOTE.—The classification of chartered bank loans was revised in 1950; the figures in this table are, therefore, not comparable with those prior to 1950.

Class of Loan	1951	1952	1953
	$'000	$'000	$'000
Government and Other Public Services—			
Provincial governments	24,859	6,349	10,616
Municipal governments and school districts	114,531	102,399	109,389
Religious, educational, health and welfare institutions	45,912	43,284	47,094
Totals, Government and Other Public Services	185,302	152,032	167,699
Financial—			
Investment dealers and brokers to the extent payable on call or within thirty days	107,091	135,173	110,138
Trust, loan, mortgage, investment and insurance companies and other financial institutions	91,720	107,519	122,585
Totals, Financial	198,811	242,692	232,723
Personal—			
Individuals, for other than business purposes, on the security of marketable stocks and bonds	255,605	274,324	300,198
Individuals, for other than business purposes, *n.e.s*	211,303	227,992	298,201
Totals, Personal	466,908	502,316	598,399

17.—Loans of Chartered Banks, according to Class, Outstanding at Sept. 30, 1951-53 —concluded

Class of Loan	1951	1952	1953
	$'000	$'000	$'000
Agricultural, Industrial and Commercial—			
Farmers	298,936	334,202	353,984
Industry—			
Chemical and rubber products	54,257	30,322	43,421
Electrical apparatus and supplies	41,388	22,886	41,924
Food, beverages and tobacco	171,968	168,366	162,793
Forest products	115,685	136,500	139,764
Furniture	19,776	14,363	17,616
Iron and steel products	97,509	95,641	124,545
Mining and mine products	33,381	47,991	62,039
Petroleum and products	31,055	32,813	55,548
Textiles, leather and clothing	213,377	157,963	199,485
Transportation equipment	46,437	52,810	52,798
Other products	63,118	53,156	58,859
Public utilities, transportation and communication companies	87,937	67,526	61,740
Construction contractors	151,774	158,643	174,990
Grain dealers and exporters	98,558	186,518	310,648
Instalment finance companies	100,830	149,397	249,261
Merchandisers	542,869	483,967	595,832
Other business	133,837	139,047	179,430
Totals, Agricultural, Industrial and Commercial	2,302,692	2,332,111	2,884,677
Grand Totals	**3,153,713**	**3,229,151**	**3,882,898**

Cheque Payments.—The monthly record of amounts of cheques charged to customers' accounts at all chartered bank offices situated in the clearing-house centres of Canada is available from 1924. The trend indicated by cheques cashed shows the occurrence of three major economic cycles since World War I. The first reached its peak in 1920 with the low point of the succeeding depression in 1922. A high point was next achieved in 1929, owing partly to economic conditions involving heavy stock speculation. A low point was reached in 1932. Except for a minor set-back in 1938, an upward trend has continued to the present.

The amount of cheques cashed in the clearing-house centres of Canada advanced year by year from 1938 to a maximum of $137,416,846,658 in 1953; this advance paralleled the upward movement in the payment of salaries and wages and the greater distribution of consumer goods through wholesale and retail outlets. The increase, amounting to 344 p.c. since 1938, was general in Canada's five economic areas, British Columbia showing the highest gain at 509 p.c. The Prairie Provinces came second, followed by the Atlantic Provinces,* Ontario and Quebec. However, of the $106,500,000,000 increase, Ontario and Quebec contributed $73,000,000,000, or 69 p.c.

Thirty-four of the 35 clearing-house centres showed an advance in 1953 over 1952, although the magnitude of the gains varied. With the exception of Ottawa, a new maximum was established in each centre. Payments at Toronto, the leading centre, increased 16·3 p.c., those at Montreal 7·8 p.c., Winnipeg 4·9 p.c. and Vancouver 6·5 p.c.

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* Includes St. John's, N'f'ld., in 1953, which was excluded in the 1938 data. Excluding St. John's in 1953, ranking would be: Prairie Provinces, Ontario, Maritime Provinces and Quebec.

18.—Cheques Cashed at Individual Clearing-House Centres, 1949-53

Note.—Figures for earlier years will be found in the corresponding table of previous Year Books.

Clearing-House Centre	1949	1950	1951	1952	1953
	$	$	$	$	$
Atlantic Provinces—					
Halifax	1,065,168,877	1,186,545.819	1,334,025,774	1,374,609,920	1,473,198,649
Moncton	383,934,526	408,604,811	431,781.204	437,891,776	508,737,477
Saint John	511.975,434	521,695,644	568,605,976	632,357.394	680,166,727
St. John's [1]	356,595,091	531,314,367	554,032,197	621,505,645	735,433,898
Totals, Atlantic Provinces	2,317.673,928	2,648,160,641	2,888,445,151	3,066,364,735	3,397,536,751
Quebec—					
Montreal	22,037,124,579	26,099,176.124	29,184,504,317	31,720,259,139	34,178,607,458
Quebec	2,410,872,120	2,695,919.675	3,163,124,781	3,358,306,012	3,535,148,293
Sherbrooke	284,493,033	311,762,513	381,090,356	415,994,071	425,670,474
Totals, Quebec	24.732,489,732	29,106,858,312	32,728,719,454	35,494,559,222	38,139,426,225
Ontario—					
Brantford	435,843,033	422,413,293	486,994,671	495,283,901	522,687,516
Chatham	315,369,271	346.208,709	407,321,638	404,889,560	433,438,973
Cornwall	...	104,523,918[2]	187,013,346	196,278,431	200,420,702
Fort William	225,286,483	248,218,046	266,631,817	282,770,535	311,696,268
Hamilton	2,124,308,068	2,369,329,690	2,996,002,993	3,085,730,125	3,409,585,973
Kingston	241,453,150	273,225,082	279,208,526	316,909,862	341,335,311
Kitchener	494,710,382	536,279,128	623,023,658	617,647,692	765,740,577
London	1,181,502,918	1,391,711,953	1,528,832,870	1,567,887,355	1,973,402,244
Ottawa	4,040,899,636	4,140,136,704	4,459,566,076	5,454,556,571	4,588,480,404
Peterborough	279,739,034	308,157,373	339,002,949	334,153,813	365,075,178
St. Catharines	379,037,195	444,388.945	551,345,610	589,866,082	632,551,049
Sarnia	310,461,518	339,483,674	425,659,981	398,218,819	433,418,719
Sudbury	267,190,931	290,184,475	352,304,822	384,039,124	434,356.825
Toronto	24,712,385,631	30,276,045,017	32,271,836,720	36,606,773,373	42,579,170,381
Windsor	1,460,893,330	1,655,860,938	1,872,210,810	1,982,438,963	2,082,419,967
Totals, Ontario	36,469,080,580	43,146,166,945	47,046,956,487	52,717,444,206	59,073,780,087
Prairie Provinces—					
Brandon	145,757,042	154,492,112	176,870,098	181,575,950	186,064,872
Calgary	2,507,516,671	2,870,683,290	3,349,247,240	4,452,583,018	5,020,505,662
Edmonton	1,893.296,099	2,371,405,098	2,459,202,689	2,966.420,466	3,514,626,107
Lethbridge	246,492,056	284,387,678	309,577,383	311,448,198	349,470,995
Medicine Hat	102,839,449	105,443,903	123,547,273	127,437.085	157,084,209
Moose Jaw	248,492,488	248,525,487	277,985,850	310,945,984	319,040,193
Prince Albert	133,321,676	140,421,297	154,870,799	163,053,807	175,349,193
Regina	1,565,139,921	1,640,419,630	1,759,586,765	2,147,982,066	2,482,735,680
Saskatoon	465,492,857	511,781,987	590,104,806	637,830,056	741,432,468
Winnipeg	9,186,178,131	8,960,145,720	10,373,940,214	11,508,237,900	12,072,971,671
Totals, Prairie Provinces	16,494,526,390	17,287,706,202	19,574,933,117	22,807,514,530	25,019,281,050
British Columbia—					
New Westminster	319,810,859	401,102,786	479,943,321	491,736,985	554,708,805
Vancouver	6,157,070,811	6,901,611,242	8,212,945,667	9,193,882,535	9,790,943,286
Victoria	1,063,710,543	1,143,852,711	1,252,689,860	1,425,391,808	1,441,170,454
Totals, British Columbia	7,540,592,213	8,446,566,739	9,945,578,848	11,111,011,328	11,786,822,545
Grand Totals	**87,554,362,843**	**100,635,458,839**	**112,184,633,057**	**125,196,894,021**	**137,416,846,658**

[1] Included from April 1949. [2] Included from May 1950.

Financial Statistics of Individual Chartered Banks.—The principal assets and liabilities of the individual chartered banks are given for the five latest years in Tables **19** and **20**.

19.—Principal and Total Assets of Individual Chartered Banks, 1949-53

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year. Figures for earlier years will be found in the corresponding table of previous Year Books.

Chartered Bank	Year	Cash Reserve Against Canadian Deposits[1]	Total Securities	Total Loans	Total Assets
		$	$	$	$
Bank of Montreal	1949	198,839,952	1,198,396,566	506,870,310	2,087,644,326
	1950	191,016,530	1,174,589,623	552,718,886	2,119,873,626
	1951	200,107,510	1,107,947,826	656,577,531	2,211,281,293
	1952	215,777,959	1,100,814,002	667,093,782	2,240,588,354
	1953	222,295,787	1,053,121,771	805,861,103	2,340,465,775
Bank of Nova Scotia	1949	61,980,211	312,681,002	307,239,629	783,613,909
	1950	65,845,694	268,697,300	348,433,490	800,761,697
	1951	67,622,645	256,251,196	409,774,033	865,013,063
	1952	72,085,522	265,323,337	432,765,453	904,879,308
	1953	73,981,521	223,875,045	511,757,622	949,891,573
Bank of Toronto	1949	42,979,749	231,027,870	138,250,480	446,511,338
	1950	43,127,671	227,601,591	152,578,963	463,048,709
	1951	49,515,953	189,427,769	192.550,796	483,232,621
	1952	47,723,871	203,608,439	197,857,089	505,344,564
	1953	48,334,089	215,670,262	219,848,664	546,607,627
Provincial Bank of Canada	1949	14,312,526	79,270,394	52,297,136	158,187,412
	1950	14,692,842	82,090,665	56,273,110	167,241,272
	1951	16,321,625	79,722,292	63,224,812	174,666,980
	1952	17,034,410	87,184,699	66,039,332	187,346,432
	1953	18,192,816	83,533,558	76,654,336	197,165,541
Canadian Bank of Commerce	1949	125,794,695	821,003,490	486,636,542	1,589,480,484
	1950	134,567,081	812,244,338	542,079,465	1,669,015,086
	1951	136,739,020	698,032,511	674,461,500	1,717,687,434
	1952	151,473,937	708,404,301	696,852,142	1,766,535,649
	1953	157,185,023	720,255,692	790,954,193	1,879,817,140
Royal Bank of Canada	1949	175,243,729	1,112,548,662	634,830,429	2,237,314,965
	1950	181,864,282	1,182,485,204	685,317,779	2,385,999,922
	1951	188,444,863	1,077,074,515	833,241,545	2,459,891,410
	1952	190,988,267	1,112,957,173	888,679,717	2,588,138,130
	1953	207,084,528	1,091,068,175	1,035,983,280	2,768,691,988
Dominion Bank	1949	42,144,497	163,387,422	158,749,545	406,787,719
	1950	39,913,392	170,970,431	175,266,211	437,759,966
	1951	40,515,499	123,093,854	224,941,378	454,980,847
	1952	44,505,290	145,656,549	224,745,862	489,879,099
	1953	42,899,354	124,196,023	270,628,648	511,877,642
Banque Canadienne Nationale	1949	39,823,480	207,237,242	143,411,373	417,057,585
	1950	38,955,630	202,421,326	155,556,240	423,504,345
	1951	37,737,765	183,807,508	194,948,635	447,669,846
	1952	41,354,385	214,707,113	185,243,619	475,006,948
	1953	42,728,151	212,492,225	211,967,941	501,758,204
Imperial Bank of Canada	1949	43,684,979	227,963,454	183,698,606	498,578,396
	1950	40,328,068	223,294,804	198,016,258	513,528,659
	1951	41,925,811	199,729,358	237,027,874	535,031,692
	1952	48,833,403	217,973,446	239,577,993	568,935,009
	1953	50,411,425	203,375,349	281,688,095	604,769,416
Barclays Bank (Canada)	1949	3,621,232	16,536,402	6,437,069	32,588,143
	1950	3,602,728	19,005,919	6,170,825	34,376,570
	1951	3,633,533	15,494,875	8,975,817	35,345,077
	1952	3,555,623	13,694,970	9,028,444	33,827,029
	1953	3,439,002	14,295,754	9,776,491	33,435,254
Mercantile Bank of Canada	1953[2]	1,125,979	1,597,125	10,215	3,577,737
Totals	**1949**	**748,425,050**	**4,370,052,504**	**2,618,421,119**	**8,657,764,277**
	1950	**753,913,918**	**4,363,401,201**	**2,872,411,227**	**9,015,109,852**
	1951	**782,564,224**	**3,930,581,704**	**3,495,723,921**	**9,384,800,263**
	1952	**833,332,667**	**4,070,324,029**	**3,607,883,433**	**9,760,480,522**
	1953[2]	**866,645,528**	**3,942,016,950**	**4,215,121,224**	**10,334,778,308**

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[1] Total Bank of Canada notes in the possession of the chartered bank together with its deposits with the Bank of Canada, but excluding minor amounts of gold carried in such reserves. [2] Mercantile Bank of Canada commenced business Dec. 7, 1953; December figures included in computation of totals for the year 1953.

20.—Principal and Total Liabilities of Individual Chartered Banks, 1949-53

NOTE.—The statistics in this table are averages computed from the twelve monthly returns in each year. Figures for earlier years will be found in the corresponding table of previous Year Books.

Chartered Bank	Year	Notes in Circulation	Deposit Liabilities			Liabilities to Shareholders	Total Liabilities
			Government	Public	Inter-Bank		
		$	$	$	$	$	$
Bank of Montreal	1949	3,762,901	143,557,605	1,775,070,481	47,430,907	81,000,000	2,085,150,943
	1950	[1]	113,188,046	1,823,451,538	59,927,419	84,000,000	2,118,132,091
	1951	[1]	129,684,548	1,860,667,574	81,557,845	84,750,000	2,208,273,742
	1952	[1]	107,611,441	1,926,754,279	65,041,858	87,500,000	2,239,262,077
	1953	[1]	141,794,670	2,003,158,579	56,300,487	90,750,000	2,339,762,245
Bank of Nova Scotia	1949	1,267,888	25,405,279	681,721,012	13,417,246	36,000,000	781,151,368
	1950	53,686	18,355,416	699,625,336	19,454,097	36,000,000	797,830,286
	1951	47,669	20,907,810	749,998,378	23,984,242	39,006,346	861,700,956
	1952	43.153	17,603,545	795,682,063	22,355,716	44,913,105	901,237,786
	1953	36,382	27,881,013	829,413,305	23,801,877	45,750,000	946,811,815
Bank of Toronto	1949	552,345	24,848,030	388,741,854	8,152,963	20,000,000	445,343,956
	1950	[1]	16,436,186	409,860,096	11,137,427	20,000,000	461,577,056
	1951	[1]	17,682,531	422,591,985	15,031,086	20.000,000	481,528,415
	1952	[1]	11,886,591	451,750,319	15,837,822	20,000,000	503,476,293
	1953	[1]	14,665,169	491,155,819	15,349,410	20,333,333	544,856,107
Provincial Bank of Canada	1949	269,588	3,406,916	144,253,494	2,256,683	6,000,000	157,776,795
	1950	[1]	3,491 839	154,160,746	2,623,962	6,000,000	166,729,836
	1951	[1]	5,347,649	159,347,422	2,960,043	6,000,000	174,104,128
	1952	[1]	3,291,919	172,965,142	4,091,695	6,074,795	186,753,322
	1953	[1]	4,951,788	179,832,056	4,059,411	7,307,804	196,605,520
Canadian Bank of Commerce	1949	3,067,362	91,752,261	1,355,465,678	24,151,597	60,000,000	1,586,237,445
	1950	31,268	76,413,172	1,435,888,140	34,135,503	60,000,000	1,665,056,260
	1951	25,909	82,882,336	1,459,848,644	42,592,363	60,000,000	1,712,711,379
	1952	20,430	57,997,732	1,551,364,034	44,875,576	61,250,000	1,761,814,574
	1953	16,935	71,573,732	1,651,103,790	45,017,468	66,166,667	1,878,365,773
Royal Bank of Canada	1949	3,948.699	104,372,640	1,936,689,313	56,516,637	79,000,000	2,235,394,252
	1950	339 089	81,870,705	2.093,354,592	63,769,448	80,000,000	2,382,629,654
	1951	206.052	76,713,987	2,143,313,746	75,401,653	85,333,333	2,458,953,685
	1952	116,786	72,503,287	2,292,228,477	69,405.292	87,500,000	2,587,152,962
	1953	88,633	90,042,627	2,448,831,763	77,027,765	92,500,000	2,767,789,227
Dominion Bank	1949	517,692	24,164,802	345,866,988	8,450,743	17,000,000	405,657,911
	1950	[1]	16,974.562	380,924,138	10,982,024	17,250,000	436,615,341
	1951	[1]	15,060.164	388,829,356	16,577,613	18,000,000	454,387,198
	1952	[1]	11,981,890	426,908,833	18,306,790	18,000,000	488,959,013
	1953	[1]	13,263,189	452,385,538	17,730,813	18,250,000	510,847,774
Banque Canadienne Nationale	1949	563,659	14,106,098	382,769,935	4,146,958	14,000,000	416,560,358
	1950	[1]	9,639,856	394,021,804	4,093,873	14,000,000	422,940,949
	1951	[1]	15.959.778	409,827.537	5,130,031	14,000,000	447,001,315
	1952	[1]	10,349.047	442,147,527	5,822,107	14,083,333	474,311,732
	1953	[1]	13,253,859	466,563,065	5,296,056	14,583,333	501,352,971
Imperial Bank of Canada	1949	726,098	56,621,027	400,899,914	12,759,535	17,000,000	496,993,803
	1950	[1]	41,202,187	428,550.979	15,635,653	17,000,000	511,693.047
	1951	[1]	33,376,885	448,779,517	20,993,681	17,250.000	533,285,747
	1952	[1]	38,557,293	485,294,673	16,205,049	18,000,000	567,824,514
	1953	[1]	33,453,821	527,991,681	16,939,706	18,250,000	603,716,634

For footnote, *see* end of table.

20.—Principal and Total Liabilities of Individual Chartered Banks, 1949-53—concluded

Chartered Bank	Year	Notes in Circulation	Deposit Liabilities			Liabilities to Shareholders	Total Liabilities
			Government	Public	Inter-Bank		
		$	$	$	$	$	$
Barclays Bank (Canada)	1949	55,760	2,092,673	19,888,763	6,549,143	2,500,000	32,448,170
	1950	[1]	2,040,117	21,436,877	6,587,591	3,000,000	34,219,284
	1951	[1]	1,774,343	21,916,647	6,417,316	3,000,000	35,173,869
	1952	[1]	808,325	21,549,835	5,977,023	3,000,000	33,640,748
	1953	[1]	566,188	20,686,305	6,498,733	4,000,000	33,236,095
Mercantile Bank of Canada	1953[2]	—	—	290,615	852,566	1,900,000	3,662,101
Totals	**1949**	**14,731,992**	**490,327,331**	**7,431,367,432**	**183,832,412**	**332,500,000**	**8,642,715,001**
	1950	**424,043**	**379,612,086**	**7,841,274,246**	**228,346,997**	**337,250,000**	**8,997,423,804**
	1951	**279,630**	**399,390,031**	**8,065,120,806**	**290,645,873**	**347,339,679**	**9,367,120,434**
	1952	**180,369**	**332,591,070**	**8,566,645,182**	**267,918,928**	**360,321,233**	**9,744,433,021**
	1953[2]	**140,950**	**411,420,224**	**9,071,154,452**	**268,092,773**	**378,049,470**	**10,323,649,336**

[1] After January 1950, the chartered banks' liability for such of their notes as then remained outstanding was transferred to the Bank of Canada. [2] Mercantile Bank of Canada commenced business Dec. 7, 1953; December figures included in computation of totals for the year 1953.

Net Profits of Individual Chartered Banks.—The chartered banks are, for the most part, nation-wide institutions, doing business in all parts of the country. Their earnings, therefore, reflect with considerable accuracy the fluctuations of general business.

21.—Net Profits of Chartered Banks and Rates of Dividend Paid, for their Business Years Ended 1951-53

Chartered Bank	1951		1952		1953	
	Net Profits	Dividend Rate	Net Profits	Dividend Rate	Net Profits	Dividend Rate
	$	p.c.	$	p.c.	$	p.c.
Bank of Montreal	5,355,374	10[1]	5,668,778	10	7,042,677	12
Bank of Nova Scotia	2,428,256	16	2,538,166	16	3,011,398	16[2]
Bank of Toronto	1,116,234	14[1]	1,163,220	14[1]	1,303,401	14[3]
Provincial Bank of Canada	306,025	6[2]	332,845	6[2]	426,094	6[1]
Canadian Bank of Commerce	4,023,145	10[3]	4,510,641	10[1]	5,789,242	12
Royal Bank of Canada	6,306,115	10	7,129,085	10	8,635,136	12
Dominion Bank	1,169,064	10	1,158,556	10	1,393,459	12
Banque Canadienne Nationale	802,612	8	847,052	8	1,364,849	10
Imperial Bank of Canada	1,236,400	12	1,318,996	12	1,402,166	12
Barclays Bank (Canada)	[4]	...	10,333	...	17,967	...
Mercantile Bank of Canada[4]	—	—	—	—	[4]	[4]
Totals, Net Profits	**22,743,225**	...	**24,677,672**	...	**30,386,389**	...

[1] Plus extra of 2 p.c. [2] Plus extra of 1 p.c. [3] Plus extra of $\frac{1}{2}$ of 1 p.c. [4] Not reported.

Subsection 2.—Government and Other Savings Banks

There are three distinct types of savings banks in Canada in addition to the savings departments of the chartered banks and of trust and loan companies: (1) the Post Office Savings Bank, in which deposits are a direct obligation of the Government of Canada; (2) Provincial Government savings banking institutions in Newfoundland, Ontario and Alberta, where the depositor becomes a direct creditor of the province; and (3) two important savings banks in the Province of

Quebec, the Montreal City and District Savings Bank and La Banque d'Économie de Québec, established under federal legislation and reporting monthly to the Federal Department of Finance. Other agencies for the promotion of thrift, through encouraging regular savings, are the co-operative credit unions.

Post Office Savings Bank.—The Post Office Savings Bank was established, under the Post Office Act of 1867 (31 Vict., c. 10) in order to "enlarge the facilities now available for the deposit of small savings, to make the Post Office available for that purpose, and to give the direct security of the nation to every depositor for repayment of all money deposited by him together with the interest due thereon". Branches of the Government of Canada's Savings Bank under the Department of Finance were gradually amalgamated with this Bank over a period of 50 years and the amalgamation was completed in March 1929.

22.—Financial Business of the Post Office Savings Bank, as at Mar. 31, 1949-54

NOTE.—Figures for earlier years will be found in the corresponding table of previous Year Books. Totals back to 1868 are given in the 1926, 1946 and 1951 editions, at pp. 833-834, 978 and 1051, respectively.

Item	1949	1950	1951	1952	1953	1954
	$	$	$	$	$	$
Deposits—						
Total	37,741,389	38,754,634	37,661,921	38,031,232	39,322,230	37,792,914
Made during year	12,843,954	12,144,889	10,368,266	11,011,092	11,521,743	10,597,046
Interest on deposits	710,012	729,007	733,899	722,804	741,954	733,009
Totals, cash and interest	13,553,966	12,873,896	11,102,165	11,733,896	12,263,697	11,330,055
Withdrawals	12,038,638	11,860,651	12,194,872	11,364,584	10,972,700	12,859,370

Provincial Government Savings Banks.—Institutions for the deposit of savings are operated by the Provincial Governments of Newfoundland, Ontario and Alberta.

Newfoundland.—The Newfoundland Savings Bank was established in 1834 and the following is a summary financial statement for the years ended Mar. 31, 1952 and 1953:—

	1952	*1953*
	$	$
Interest on investments, etc	765,752	790,653
Net rental income	—	2,589
Profit on sale of investments	2,093	5,215
Less: Interest on deposits	*657,917*	*673,430*
Less: Expenses	*42,692*	*47,473*
Less: Transfer to reserves	*30,000*	*30,000*
NET INCOME	37,236	47,554

The number of accounts increased from 31,601 at Mar. 31, 1952, to 34,094 at Mar. 31, 1953, and deposits from $24,875,733 to $26,035,571 in the same comparison. The interest rate on deposits of private individuals, trust accounts and estates is 3 p.c. per annum on accounts of up to $5,000, 2½ p.c. from $5,001 to $7,500, and 2 p.c. on accounts of over $7,500; on deposits of corporations the rate is 1 p.c. per annum. A general reserve of $1,185,465 is held.

Ontario.—The establishment of the Province of Ontario Savings Office was authorized by the Ontario Legislature at the 1921 session and the first branches were opened in March 1922. Interest at the rate of 1½ and 2 p.c. per annum, compounded half-yearly, is paid on accounts, and deposits are repayable on demand. Total deposits at Mar. 31, 1954, were $60,725,000, and the number of depositors was approximately 95,000. Twenty-one branches are in operation throughout the Province.

Alberta.—Savings deposits are accepted at 47 Provincial Treasury Branches throughout Alberta. The total of these deposits at Mar. 31, 1954, was $20,074,646 payable on demand and bearing interest at from ½ of 1 p.c. to 2 p.c.

The Provincial Treasury has issued demand certificates bearing interest at 1½ p.c. or term certificates for one, two, three, four or five years, in denominations of $25 and upwards, bearing interest at 2 p.c. for one or two years, 2¼ p.c. for three or four years and 2½ p.c. for five years. The total amount in savings certificates at Mar. 31, 1954, was $240,078 made up of $109,128 in demand certificates and $130,950 in term certificates. Deposits from the public for the purchase of such certificates were discontinued as from April 1951.

Other Savings Banks.—The Montreal City and District Savings Bank, founded in 1846 and now operating under a charter of 1871 had, at Mar. 31, 1954, a paid-up capital and reserve of $7,000,000, savings deposits of $191,169,976, and total liabilities of $198,630,237. Total assets amounted to $199,010,639, including over $156,000,000 of federal, provincial and municipal securities. La Banque d'Économie de Québec, founded in 1848 (as La Caisse d'Économie de Notre-Dame de Québec) under the auspices of the St. Vincent de Paul Society, incorporated by Act of the Canadian Legislature in 1855 and given a federal charter by 34 Vict., c. 7, had at Mar. 31, 1954, savings deposits of $28,202,105 and a paid-up capital and reserve of $3,000,000. Liabilities amounted to $31,432,601 and total assets to $31,876,665.

Table **23** shows the combined savings deposits in the Montreal City and District Savings Bank and La Banque d'Économie de Québec for the years ended Mar. 31, 1940-54.

23.—Combined Deposits in the Montreal City and District Savings Bank and La Banque d'Économie de Québec, Years Ended Mar. 31, 1940-54

NOTE.—Figures for 1868-1904 are given in the 1926 Year Book, pp. 833-834, and for 1905-39 in the 1946 edition, p. 980.

Year	Deposits	Year	Deposits	Year	Deposits
	$		$		$
1940	79,838,963	1945	122,574,607	1950	192,567,275
1941	76,391,775	1946	140,584,525	1951	193,982,871
1942	74,386,412	1947	153,137,545	1952	200,342,385
1943	84,023,772	1948	170,103,786	1953	214,122,001
1944	103,276,757	1949	184,250,615	1954	219,372,081

Credit Unions.[*]—At the end of 1953, there were 3,607 credit unions in Canada of which 3,413 reported a membership of 1,393,585 and total assets of $492,384,022. These groups are organized on a co-operative basis to pool savings of members and to make loans to members for provident and productive purposes. During 1953, loans in the amount of $204,863,000 were made to members.

Credit unions were established first in the Province of Quebec in 1900 and have shown the greatest growth in that Province. About one-third of all credit unions in Canada are in the Province of Quebec. Ontario follows Quebec in credit union development and in recent years has been adding an average of nearly 150 new groups annually.

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[*] Prepared by J. E. O'Meara, Economics Division, Marketing Service, Department of Agriculture, Ottawa.

Nearly 50 p.c. of the credit unions in Quebec are located in rural areas but growth in other provinces, especially Ontario, British Columbia and Alberta—has been mainly among industrial and urban groups. Reports from provincial inspectors in 1953 indicated that for the first time credit unions among urban dwellers and industrial workers outnumbered those in rural areas.

Members save by buying shares and making deposits in credit unions. The total amount of savings by members at the end of 1953, was $457,100,000. Thus, average savings per member in 1953 were $328.07, compared to $316.53 in 1952.

In 1953, the Federal Government passed enabling legislation providing for the organization and incorporation of the Canadian Co-operative Credit Society, which will provide deposit and borrowing service on a nation-wide scale to provincial credit societies and commercial co-operatives operating in more than one province.

24.—Growth of Credit Unions in Canada, 1940 and 1945-53

Year	Provinces in which Unions Exist	Credit Unions	Credit Unions Reporting	Members[1]	Assets[1]
	No.	No.	No.	No.	$
1940	9	1,167	1,144	201,137	25,069,685
1945	9	2,219	2,175	590,794	145,890,889
1946	9	2,422	2,326	688,739	187,507,303
1947	9	2,516	2,367	779,199	221,116,168
1948	9	2,608	2,482	850,608	253,584,282
1949[2]	10	2,819	2,705	940,427	282,242,278
1950	10	2,965	2,801	1,036,175	311,532,143
1951	10	3,121	2,952	1,137,931	358,646,767
1952	10	3,335	3,080	1,260,435	424,400,375
1953	10	3,607	3,413	1,393,585	492,384,022

[1] Reporting organizations only.

[2] Newfoundland included from 1949.

25.—Summary Statistics of Credit Unions,[1] by Province, 1953

Province	Credit Unions Chartered	Credit Unions Reporting	Members	Assets	Shares	Deposits	Loans to Members During Year	Total Loans Since Inception
	No.	No.	No.	$	$	$	$	$
N'f'ld	78	51	3,388	310,614	269,650	8,616	156,924	2,745,032
P.E.I	53	53	9,625	1,137,211	884,607	142,774	928,714	5,048,222
N.S	221	185	49,831	7,255,455	6,575,345	154,919	4,824,334	34,784,490
N.B	162	161	51,823	7,422,022	6,561,357	119,737	4,002,856	30,070,025
Que.—								
Desjardins	1,129	1,120	746,789	315,528,337	21,957,145	275,777,246	80,602,938	623,606,905
Que. League	111	111	33,000	5,879,793	2,105,088	3,376,479	4,500,000	14,623,196
Montreal Fed.	12	12	24,312	16,332,487	993,283	14,334,378	2,368,568	27,332,695
Ont.[2]	910	855	237,399	63,167,673	40,022,687	16,626,106	51,520,264	204,369,427
Man.	170	162	46,467	11,038,964	6,616,588	2,869,018	9,127,829	40,323,579
Sask.	268	263	68,286	28,471,111	19,326,460	5,768,183	20,490,268	80,846,297
Alta.	210	201	34,857	7,800,024	6,499,944	617,084	6,266,231	32,664,863
B.C.	283	239	87,808	28,040,331	21,502,640	4,097,878	20,074,074	83,318,365
Totals, 1953	**3,607**	**3,413**	**1,393,585**	**492,384,022**	**133,314,794**	**323,892,418**	**204,863,000**	**1,179,733,096**
Totals, 1952^{r}	**3,335**	**3,080**	**1,260,435**	**424,400,375**	**102,485,264**	**292,853,772**	**153,879,469**	**976,544,051**

[1] Reporting organizations only.

[2] Estimated.

Section 4.—Foreign Exchange

Exchange Rates.—The Canadian dollar, adopted as Canada's currency in 1857, was equivalent to 15/73 of the pound sterling; in other words, the pound was equal to $4.866 in Canadian currency at par, and remained so, with minor variations between the import and export gold points representing the cost of shipping gold in either direction, until the outbreak of World War I. During the first 11 years after Confederation, the Canadian dollar was at a premium in the United States, as the United States dollar was not, after the Civil War, redeemable in gold until 1878. From the latter date to 1914, the dollar in the two countries was equivalent at par, and variation was only between the import and export gold points or under $2 per $1,000.

At the outbreak of World War I, the United Kingdom and Canada suspended the gold standard, and their currencies fell to a discount at New York. However, this discount was 'pegged', or kept at a moderate percentage, by sales of United States securities previously held in the United Kingdom, by borrowing in the United States and, after the United States entered the War, by arrangement with the United States Government. After the War, when the exchanges were 'unpegged', the British pound went as low as $3.18 and the Canadian dollar as low as 82 cents at New York. In the course of the next year or two, exchange returned practically to par and the United Kingdom resumed gold payments in April 1925 as did Canada on July 1, 1926. Until 1928, the exchanges were within the gold points but in 1929 the Canadian dollar again fell to a moderate discount at New York. The dislocation of exchange persisted, with the exception of a few months in the latter half of 1930, into 1931. Dollar rates were below the gold export points, however, only for a few scattered intervals. Immediately on the outbreak of World War II in September 1939, the United Kingdom and other sterling countries introduced foreign exchange control, involving fixed buying and selling rates which were $4.02½ and $4.03½, respectively, in terms of the U.S. dollar. Meanwhile, the Canadian dollar declined gradually until Sept. 16, 1939, when the Government established the Foreign Exchange Control Board.* Fixed buying and selling rates were provided for United States funds and sterling at the outset, being $1.10 and $1.11, and $4.43 and $4.47, respectively. The former rates fixed the value of the Canadian dollar at 90·09 cents to 90·91 cents in terms of the U.S. dollar; this was approximately the market rate to which the Canadian dollar had fallen just prior to exchange control and, in terms of devaluation, represented a level midway between the U.S. dollar and sterling.

Apart from a minor adjustment on Oct. 15, 1945, when selling rates for U.S. dollars and sterling were lowered to $1.10½ and $4.45, respectively, the Foreign Exchange Control Board's official rates remained unaltered until July 5, 1946. At this time, the rate on the U.S. dollar was restored to par with buying and selling rates for U.S. dollars at $1.00 and $1.00½ and sterling, $4.02 and $4.04. These rates continued in effect until Sept. 19, 1949, when, following a 30·5 p.c. reduction by the United Kingdom in the value of sterling to $2.80 U.S. (which action was paralleled in varying degrees by numerous other currencies), Canada returned to the former official rates of $1.10 and $1.10½ for United States funds; sterling was quoted at new rates of $3.07¼ and $3.08¾, based on the New York cross rate.

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* The operations of the Foreign Exchange Control Board from the time of its establishment to the termination of exchange control in December 1951 are reviewed in previous editions of the Year Book.

On Sept. 30, 1950, the Minister of Finance announced that official fixed foreign exchange rates, which had been in effect at varying levels since 1939, would be cancelled effective Oct. 2 and that rates of exchange would be determined by conditions of supply and demand for foreign currencies, i.e., by market trading within the framework of exchange control. Subsequently, the U.S. dollar fell to a level between \$1.04 and \$1.05 in terms of Canadian funds in early December 1950. After strengthening in the second quarter of 1951, it declined to between \$1.01 and \$1.04 in December 1951.

On Dec. 14, 1951, the Foreign Exchange Control Regulations were revoked by the Governor in Council and new Regulations were passed which exempted all persons and transactions from the various declaration and permit requirements of the Foreign Exchange Control Act, thus terminating exchange control in Canada. During 1952, the U.S. dollar declined gradually to an average of 96 cents in Canadian funds in September and then rose slightly to an average of 97 cents in December.

In 1953 the U.S. dollar strengthened during the first half of the year, averaging 99 cents in Canadian funds in June, then declined to an average of 97 cents in December.

26.—Canada's Holdings of Gold and United States Dollars, as at Dec. 31, 1939-53

(Millions of U.S. Dollars)

Year	Exchange Fund Account and Bank of Canada		Other Government of Canada Accounts	Total
	Gold	U.S. Dollars	U.S. Dollars	Gold and U.S. Dollars
1939.....	218·0	54·8	33·4	404·2[1]
1940.....	136·5	172·8	20·8	332·1[1]
1941.....	135·9	28·2	23·5	187·6
1942.....	154·9	88·0	75·6	318·5
1943.....	224·4	348·8	76·4	649·6
1944.....	293·9	506·2	102·1	902·2
1945.....	353·9	922·0	232·1	1,508·0
1946.....	536·0	686·3	22·6	1,244·9
1947....	286·6	171·8	43·3	501·7
1948....	401·3	574·5	22·0	997·8
1949....	486·4	594·1	36·6	1,117·1[2]
1950....	580·0	1,144·9	16·6	1,741·5
1951....	841·7	899·5	37·4	1,778·6
1952....	885·0	961·8	13·4	1,860·2
1953....	986·1	802·0	30·4	1,818·5

[1] Includes private holdings, exclusive of working balances, of \$98,000,000 at Dec. 31, 1939, and \$2,000,000 at Dec. 31, 1940. [2] Excludes \$18,200,000 borrowed in the United States in August 1949 and set aside for the retirement on Feb. 1, 1950, of a security issue guaranteed by the Federal Government and payable at the holder's option in U.S. dollars.

PART II.—MISCELLANEOUS COMMERCIAL FINANCE

Section 1.—Loan and Trust Companies*

An outline of the development of loan and trust companies in Canada from 1844 to 1913 is given in the 1934-35 Year Book, p. 993. The laws relating to loan and trust companies were revised by the Loan and Trust Companies Acts of 1914 (4-5 Geo. V, cc. 40 and 55), with the result that the statistics of provincially incorporated loan and trust companies ceased to be collected. However, summary statistics of provincial companies have been supplied by those companies since 1922 and summary figures for the years 1952 and 1953 are included in Table **1** in order to complete the statistics for loan and trust companies throughout Canada. It is estimated that more than 95 p.c. of the business of provincial companies is represented in the figures, so that they may be accepted as fairly inclusive and representative of the volume of business transacted as compared with the federally licensed companies.

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* Revised under the direction of K. R. MacGregor, Superintendent of Insurance, Department of Insurance, Ottawa.

The statistics of Tables **2** and **3** refer both to those companies incorporated by the Government of Canada and by the provinces. Included in the statistics of federal companies, beginning with 1925, are data of loan and trust companies incorporated by the Province of Nova Scotia and brought by the laws of that Province under the examination of the Federal Department of Insurance, as well as data for trust companies in New Brunswick since 1934 and in Manitoba since 1938.

The progress of the aggregate of loan company business in Canada is indicated by the increase in the book value of the assets of all loan companies from $188,637,298 in 1922 to $323,591,214 in 1953. The assets of trust companies (not including estates, trust and agency funds, which cannot be regarded as assets in the same sense as company and guaranteed funds) increased from $154,202,165 in 1928 to $489,740,530 in 1953. In the former year, the total of estates, trust and agency funds administered amounted to $1,077,953,643 and in 1953 to $4,102,013,154.

Functions of Loan Companies.—The principal function of loan companies is the lending of funds on first-mortgage security, the money thus made available for development purposes being secured mainly by the sale of debentures to the investing public and by savings-department deposits. The extent of investments in mortgages by federal and provincial loan companies may be gauged by the following figures: total assets of such companies for the years 1952 and 1953 amounted to $303,306,362 and $323,591,214, respectively, which amounts include mortgage loans of $200,428,729 and $237,620,270, respectively, with resulting percentages of mortgages to total assets of approximately 66 p.c. and 73 p.c., respectively.

Functions of Trust Companies.—Trust companies act as executors, trustees and administrators under wills or by appointment, as trustees under marriage or other settlements, as agents or attorneys in the management of the estates of the living, as guardians of minor or incapable persons, as financial agents for municipalities and companies and, where so appointed, as authorized trustees in bankruptcy. Such companies receive deposits for investment, but the investing and lending of such deposits and of actual trust funds are restricted by law.

Statistics of Loan and Trust Companies.—A summary of operations of provincial and federal loan and trust companies is given in Table **1**. As a result of the nature of the operations of the latter companies, which are intimately connected with the matter of probate, the larger trust companies usually choose to operate under provincial charters and the provincial figures represent much larger amounts than those of the federal companies.

The figures for federal loan companies include companies chartered by the Government of Nova Scotia which, by arrangement, come under inspection by the Federal Department of Insurance. The data for federal trust companies, likewise, cover companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba for the same reason.

1.—Operations of Provincial and Federal Loan and Trust Companies, as at Dec. 31, 1952 and 1953

Item	1952			1953		
	Provincial Companies[1]	Federal Companies	Total	Provincial Companies[1]	Federal Companies	Total
	$	$	$	$	$	$
Loan Companies—						
Assets (book values)	96,333,209	206,973,153	303,306,362	106,571,244	217,019,970	323,591,214
Liabilities to the public	70,406,200	175,107,452	245,513,652	78,117,467	184,448,041	262,565,508
Capital Stock—						
Authorized	22,869,225	51,250,000	74,119,225	22,688,625	51,250,000	73,938,625
Subscribed	13,682,230	19,048,700	32,730,930	13,724,930	19,048,700	32,773,630
Paid-up	10,314,409	15,981,759	26,296,168	10,134,967	16,042,383	26,177,350
Reserve and contingency funds	11,073,642	14,894,345	25,967,987	13,985,035	15,100,186	29,085,221
Other liabilities to shareholders	4,538,959	836,243	5,375,202	4,333,775	1,211,787	5,545,562
Total liabilities to shareholders	25,927,010	31,712,347	57,639,357	28,453,777	32,354,356	60,808,133
Net profits realized during year[2]	1,049,336	2,557,375	3,606,711	2,196,694	3,318,327	5,515,021
Trust Companies—						
Assets (book values)—						
Company funds	75,097,721	28,731,666	103,829,387	81,569,089	29,629,779	111,198,868
Guaranteed funds	265,257,222	107,429,793	372,687,015	268,175,625	110,366,037	378,541,662
Totals, Assets	340,354,943	136,161,459	476,516,402	349,744,714	139,995,816	489,740,530
Estates, trust, and agency funds	*3,383,650,088*	*588,550,279*	*3,972,200,367*	*3,470,781,614*	*631,231,540*	*4,102,013,154*
Capital Stock—						
Authorized	53,155,000	33,150,000	86,305,000	54,575,000	33,150,000	87,725,000
Subscribed	29,135,160	15,100,850	44,236,010	29,789,910	15,324,030	45,113,940
Paid-up	28,804,860	14,862,123	43,666,983	29,414,810	15,097,718	44,512,528
Reserve and contingency funds	27,360,303	9,178,309	36,538,612	29,591,322	9,491,256	39,082,578
Unappropriated surpluses	5,717,204	1,672,975	7,390,179	6,139,831	1,892,405	8,032,236
Net profits realized during year[2]	3,279,402	2,190,260	5,469,662	6,251,772	2,442,471	8,694,243

[1] Excludes one loan company incorporated under the laws of Quebec, the capital stock and debentures of which have been issued largely outside Canada. [2] Net profits are before income taxes except for provincial companies in 1952 when net profits are after income taxes.

2.—Assets and Liabilities of Loan Companies, 1948-53

Item	Chartered by Government of Canada[1]					
	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Assets						
Real estate[2]	4,943,594	5,266,696	5,604,342	6,571,189	6,148,146	5,949,482
Loans on real estate	93,301,864	111,574,957	124,199,351	136,720,021	146,071,337	159,833,300
Loans on securities	599,808	103,467	107,823	116,621	107,585	164,364
Bonds and debentures	43,902,301	39,797,131	33,877,064	33,674,081	34,938,078	31,929,613
Stocks	17,159,691	17,059,957	18,161,270	16,071,135	11,353,848	10,877,532
Cash	4,613,211	4,941,023	7,624,167	8,508,316	6,906,488	7,022,432
Totals, Assets[3]	**165,261,293**	**179,795,977**	**190,733,017**	**203,103,850**	**206,973,153**	**217,019,970**

For footnotes, *see* end of table.

2.—Assets and Liabilities of Loan Companies, 1948-53—concluded

Item	Chartered by Government of Canada[1]					
	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Liabilities						
Liabilities to Shareholders—						
Capital paid-up	17,980,206	18,043,255	20,606,187	18,419,587	15,981,759	16,042,255
Reserves	15,114,978	16,344,790	15,973,533	17,139,072	14,894,345	15,100,186
Total Liabilities to Shareholders[4]	34,543,526	35,381,908	37,810,634	37,199,813	31,712,347	32,354,356
Liabilities to the Public—						
Debentures	62,008,012	69,075,197	71,803,927	86,603,723	91,492,226	98,618,936
Deposits	67,289,900	73,919,782	79,141,868	77,219,272	81,669,175	83,382,889
Total Liabilities to the Public[5]	130,573,614	144,414,068	152,825,545	165,768,886	175,107,452	184,448,041
Totals, Liabilities	**165,117,140**	**179,795,976**	**190,636,179**	**202,968,699**	**206,819,799**	**216,812,397**

	Chartered by Provinces[6]		
	1951	1952	1953
Assets	$	$	$
Real estate[2]	1,292,186	1,268,099	1,154,202
Loans on real estate	49,788,615	54,357,392	77,786,970
Loans on securities	1,065,738	980,247	981,122
Bonds and debentures	31,461,663	33,506,617	20,597,703
Stocks	2,298,699	1,981,118	2,263,272
Cash	2,513,459	3,145,805	3,198,296
Totals, Assets[3]	**88,991,635**	**96,333,209**	**106,571,244**
Liabilities			
Liabilities to Shareholders—			
Capital paid-up	10,374,952	10,314,409	10,134,967
Reserves	10,494,902	11,073,642	13,985,035
Total Liabilities to Shareholders[4]	25,291,830	25,927,000	28,453,777
Liabilities to the Public—			
Debentures	21,435,748	22,394,714	23,751,608
Deposits	41,229,595	46,505,919	52,481,156
Total Liabilities to the Public[5]	63,699,805	70,406,200	78,117,467
Totals, Liabilities	**88,991,635**	**96,333,209**	**106,571,244**

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[1] Includes companies chartered by the Government of Nova Scotia which by arrangement are inspected by the Federal Department of Insurance. [2] Book value of real estate for companies' use and other real estate. [3] Includes interest due and accrued and other assets. [4] Includes other liabilities to shareholders. [5] Includes other liabilities to the public. [6] Exclusive of Nova Scotia.

3.—Assets and Liabilities of Trust Companies, 1948-53

Item	Chartered by Government of Canada[1]					
	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Assets						
Company Funds—						
Real estate[2]	2,291,721	2,391,234	2,599,598	2,597,501	2,526,037	2,376,927
Loans on real estate	4,581,282	5,438,683	5,875,800	6,005,025	5,867,035	5,904,007
Loans on securities	884,638	928,800	856,911	864.615	763,618	714,659
Bonds and debentures	11,262,394	10,435,037	11,187,960	11.741,048	11,675,897	12,149,590
Stocks	3,758,464	4.062,907	4,054,756	4,356,787	4,632,875	4,544,646
Cash	1,743,905	1,756,057	1,946,129	1,710,349	2,060,423	2,423,362
Totals, Company Funds[3],[4]	25,788,543	26,244,735	27,988,873	28,446,331	28,731,666	29,629,779

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[1] For footnotes, *see* end of table.

3.—Assets and Liabilities of Trust Companies, 1948-53—concluded

Item	Chartered by Government of Canada[1]					
	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Guaranteed Funds—						
Loans on real estate	29,211,299	32,563,611	37,860,933	43,401,633	44,504,345	49,322,834
Loans on securities	5,805,425	6,245,398	3,891,278	3,719,861	4,151,541	3,419,930
Bonds and debentures	40,022,366	46,332,850	44,734,539	40,955,188	49,928,453	50,258,820
Stocks	1,860,454	1,395,790	1,267,316	1,078,284	1,236,757	1,454,318
Cash	4,291,127	2,972,809	4,594,867	3,723,589	6,760,472	5,052,409
Totals, Guaranteed Funds[3],[4]	81,845,528	90,111,500	93,082,706	93,565,917	107,429,793	110,366,037
Liabilities						
Company Funds—						
Capital paid-up	14,459,414	14,535,022	14,739,987	15,132,221	14,862,123	15,097,718
Reserves	7,994,585	8,483,617	9,671,504	8,905,180	9,178,309	9,301,381
Totals, Company Funds[5]	25,153,650	25,892,736	27,568,241	26,658,321	28,583,274	29,048,202
Guaranteed Funds—						
Trust deposits and certificates	81.845,528	90,111,501	93,082,707	93,565,917	107,429,793	110,366,037
Totals, Guaranteed Funds	81,845,528	90,111,501	93,082,707	93,565,917	107,429,793	110,366,037
	Chartered by Provinces[6]					
Assets						
Company Funds—						
Real estate[2],[4]	6,662,666	6,959,057	5,372,046	5,745,326	5,263,529	7,199,260
Loans on real estate[4]	10,429,273	11,707,231	15,086,011	16,045,557	14,306,251	13,743,299
Loans on securities[4]	5,112,362	4,010,537	5,677,620	8,002,620	7,754,667	6,718,451
Bonds and debentures[4]	24,601,837	25,040,185	25,677,269	22,768,209	24,134,845	27,229,386
Stocks[4]	12,875,927	12,725,583	13,215,469	14,887,436	16,273,994	19,015,061
Cash	2,888,357	3,406,003	3,788,458	3,198,260	3,152,062	3,858,071
Totals, Company Funds[3]	65,639,018	68,188,785	72,736,140	74,399,404	75,097,721	81,569,089
Guaranteed Funds—						
Loans on real estate	43,391,744	48,414,936	55,235,907	63,050,583	72,005,308	80,943,551
Loans on securities	6,366,905	6,660,312	9,461,646	11,758,999	11,332,357	10,873,145
Bonds and debentures	128,182,839	144,713,565	166,622,452	166,796,191	159,557,075	159,394,731
Stocks	3,483,412	3,735,979	3,576,030	3,324,910	2,092,145	1,642,565
Cash	9,237,682	10,142,915	13,482,543	12,981,945	19,916,400	14,716,402
Totals, Guaranteed Funds[3]	190,678,903	213,671,444	251,832,240	258,413,136	265,257,222	268,175,625
Liabilities						
Company Funds—						
Capital paid-up	22,855,251	24,027,500	28,701,960	28,813,610	28,804,860	29,414,810
Reserves	24,724,995	26,177,783	24,664,370	26,061,982	27,360,303	29,591,322
Totals, Company Funds[5]	65,639,021	68,188,784	72,333,416	74,399,405	75,097,721	81,569,089
Guaranteed Funds—						
Trust deposits and certificates	190,678,903	213,671,444	247,480,875	258,413,136	265,257,222	268,175,625
Totals, Guaranteed Funds	190,678,903	213,671,444	247,480,875	258,413,136	265,257,222	268,175,625

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[1] Includes companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba which, by arrangement, are inspected by the Federal Department of Insurance. [2] Book value of real estate for companies' use and other real estate. [3] Includes other assets. [4] Includes interest due and accrued. [5] Includes other company fund liabilities. [6] For the years 1948-49 chartered by the Provinces of Ontario and Quebec and for the years 1950-53 chartered by all provinces except Nova Scotia, New Brunswick and Manitoba.

4.—Estates, Trust and Agency Funds of Trust Companies, Chartered by or Supervised by the Federal Government and by Provincial Governments, as at Dec. 31, 1944-53.

Year	Federal Companies[1]	Provincial Companies[2]	Total	Year	Federal Companies[1]	Provincial Companies[2]	Total
	$	$	$		$	$	$
1944.. ..	338,978,141	2,593,730,389	2,932,708,530	1949.....	560,080,611	2,827,988,797	3,388,069,408
1945.....	363,332,677	2,754,475,732	3,117,808,409	1950.....	494,636,746	3,126,058,749	3,620,695,495
1946.....	392,430,578	2,758,442,016	3,150,872,594	1951.....	543,983,754	3 282,558,573	3,826,542,327
1947.....	480,931,822	2,735,930,892	3,216,862,714	1952.....	588,550,279	3,383,650,088	3,972,200,367
1948.....	520,860,737	2,791,584,378	3,312,445,115	1953.....	631,231,540	3,470,781,614	4,102,013,154

[1] Includes companies chartered by the Governments of Nova Scotia, New Brunswick and Manitoba which, by arrangement, are inspected by the Federal Department of Insurance. [2] Excludes provincial companies of Nova Scotia, New Brunswick and Manitoba which are included in federal companies.

Section 2.—Licensed Small Loans Companies and Licensed Money-Lenders*

Licensed small loans companies and licensed money-lenders are subject to the provisions of the Small Loans Act, R.S.C. 1952, c. 251, an enactment of the Parliament of Canada regulating personal loans not in excess of $500 made on the security of promissory notes of borrowers. Most of these notes are additionally secured by endorsements or chattel mortgages. The Act permits maximum rates of cost of loan, including charges of every kind, of 2 p.c. per month to licensed lenders and 12 p.c. per annum to unlicensed lenders. The small loans companies—four in number—were incorporated by special Acts of the Parliament of Canada, the first such company commencing business in 1928. The money-lenders, of which there are 58, are made up of companies otherwise incorporated and include a few partnerships and individuals. In previous Year Books, Table 5, below, gave figures of licensed small loans companies only, but in this edition the comparable data includes the combined experience of small loans companies and licensed money-lenders for the years 1950 to 1953, inclusive.

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* Further details are given in the Department of Insurance report, *Small Loans Companies and Money-Lenders*, for the year ended Dec. 31, 1953.

5.—Assets and Liabilities of Small Loans Companies and Money-Lenders, 1950-53

Assets and Liabilities	1950	1951	1952	1953
	$	$	$	$
Assets				
Small loan balances	58,606,932	69,259,906	76,990,337	81,840,415
Balances, large loans and other contracts	19,091,024	29,914,099	49,584,133	66,082,405
Cash	2,378,524	3,028,310	4,336,639	3,857,635
Other	8,453,078	2,348,219	2,811,792	2,957,428
Totals, Assets	**88,529,558**	**104,550,534**	**133,722,901**	**154,737,883**
Liabilities				
Borrowed money	68,027,497	81.739,427	105,425,684	109,162,651
Reserves for losses	2,733,502	2,994,470	2,389,585	3,794,272
Paid-up capital	8,135,081	8,522,842	9,143,619	9,456,449
Surplus paid in by shareholders	365,515	322,570	1,772,570	12,222,570
Other	9,267,963	10,971,225	14,991,443	20,101,941
Totals, Liabilities	**88,529,558**	**104,550,534**	**133,722,901**	**154,737,883**

The combined companies showed a substantial increase in business for 1953 as compared with the previous year. The number of small loans made to the public during the year increased from 755,506 to 770,265, or by 2 p.c., and the amount of such loans rose from $167,161,448 to $174,503,558, or by 4 p.c. The average small loan made was approximately $227 in 1953 compared with $221 in 1952. At the end of 1953, small loans outstanding numbered 482,966 for an amount of $81,840,415 or an average of $169 per loan, and for 1952, small loans outstanding numbered 467,594 for an amount of $76,990,337 or an average of $165 per loan.

Section 3.—Sales of Canadian Bonds*

Canadian borrowers, whether governments or corporations, sold through various forms of financing a total of $2,945,488,665 in new bond issues during the year 1953. This total represented an increase of $917,260,525 over the $2,028,228,140 worth sold in 1952 but a decrease of $207,951,788 from the post-war record of $3,153,440,453 sold in 1950. Comparative totals for such sales can be traced in previous editions of the Year Book through the periods of two world wars. Figures for 1944-53 are given in Table 7, pp. 1222-1223 of this volume.

In relation to these totals, it should be noted that the yearly aggregate includes sales of Canadian Savings Loans for the entire amount sold, i.e., either to the year-end or to the closing dates in subsequent years. For example, the total of $380,761,100 for Series VII (1952) includes purchases to the closing date on Aug. 31, 1953, and the total of $850,548,900 for Series VIII (1953) includes purchases to the closing date at the end of the same year. (*See* Table 6, p. 1222.)

One interesting development in the sale of Series VIII was the degree to which buyers converted earlier issues in order to take advantage of the higher interest rate. As a report on all redeemed bonds was not available at time of writing, it is not possible to give the proportion of the total. When available, however, it should still leave the "new" money purchases far ahead of previous campaigns.

For purposes of analysis, the 1953 total of $2,945,488,665 may be classified as follows: federal, $1,950,548,900; provincial and guaranteed, $436,616,900; municipal, $222,027,065; corporation, $336,295,800. (*See* Table 7.) Of the provincial and guaranteed total, the amount of $258,500,000 represented direct issues and the amount of $178,116,900 was for guaranteed financing, such as hydro bonds and municipal issues guaranteed by provincial governments. Of the $222,027,065 municipal total, the amount of $186,784,460 represented direct issues and the amount of $35,242,605 represented parochial and miscellaneous issues, borrowed mainly for educational and hospital purposes.

During 1953 there was a noticeable increase in volume of Canadian bond issues placed on the United States market. A total of $306,599,215 was sold compared with $284,650,025 in 1952—an increase of $21,949,190 over 1952 but $77,423,785 short of the $384,023,000 figure for 1951. The increase in 1953 over 1952 was caused by the return of several large Canadian borrowers to the American market. These borrowers raised new funds in the United States because developments there seemed to suggest that the monetary stringency, produced by the anti-inflationary program, had come to an end.

From a study of Table 7, it will be noted that federal financing in 1953 at $1,950,548,900 increased by $1,119,787,800 over the previous year. This increase was caused, principally, by the success of Savings Loan Series VIII at $850,548,900 and by the sale of $1,000,000,000 of Government of Canada issues. The latter were sold during the year with maturities ranging from 18 months to four and one-half years. In addition, a federal issue for $100,000,000, twenty-five-year, $3\frac{3}{4}$-p.c. bonds was offered, initially to yield 3·85 p.c. These sales, which were all financed in the Canadian market, accounted for the entire amount (exclusive of short-term financing) borrowed by the Federal Government in 1953.

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* Prepared by E. C. Gould, Financial Editor, *The Monetary Times*.

Federal short-term financing of less than one year amounted to $3,665,000,000 in 1953 but is not included in Table 7 because of its limited distribution. Such financing included Treasury Bills, Treasury Notes and Deposit Certificates. If the total of short-term financing were added to the total of other federal financing (as is done in some reports of Canadian bond sales) the grand total of federal borrowing in 1953 would amount to $5,615,548,900 and the grand total of all Canadian bond financing would amount to $6,610,488,665.

In 1953, direct provincial flotations totalled $258,500,000, an increase of $42,400,000 over the $216,100,000 total for the previous year. Provinces which entered the 1953 bond market were, by month:—

Month	*Province*	*Amount*
		$
January	New Brunswick	7,500,000
January	Nova Scotia	12,500,000
January	Ontario	50,000,000
February	Manitoba	12,000,000
March	Quebec	26,000,000
March	Saskatchewan	15,000,000
June	Nova Scotia	10,000,000
July	New Brunswick	7,500,000
September	Manitoba	12,000,000
September	Saskatchewan	6,000,000
October	Ontario	50,000,000
December	Ontario	50,000,000
	TOTAL	258,500,000

In contrast to the $42,400,000 increase in direct provincial financing, the total of $178,116,900 for provincial guaranteed financing in 1953 represented a decrease of $32,756,100 from the 1952 total of $210,873,000. This decrease was principally attributable to a somewhat smaller amount in three flotations by the Hydro-Electric Power Commission of Ontario. These issues totalled $100,000,000 in 1953 compared with four similar issues for $160,000,000 in 1952. Other points of interest in guaranteed provincial sales for 1953 included a total of $54,500,000 by the Quebec Hydro-Electric Power Commission and a total of over $11,000,000 for municipal school financing, guaranteed by the Province of British Columbia.

As distinct from provincial guaranteed municipal issues, direct municipal bond financing in 1953 totalled $186,784,460, exclusive of $35,242,605 for parochial and miscellaneous purposes. Comparable totals for 1952 in the municipal and parochial classifications were $147,690,940 and $49,264,100, respectively. Thus, direct municipal issues showed an increase of $39,093,520 over 1952 while parochial and miscellaneous issues showed a decline of $14,021,495 in the same period.

The largest single amount borrowed by any one municipality during 1953 was represented by a flotation of the City of Toronto for $18,600,000 (November) which was sold in the United States. Other municipal borrowers in excess of $3,000,000 were: City of Toronto, $12,000,000 (January); City of Sherbrooke, $3,700,000 (March); Montreal Metropolitan Commission, $3,651,000 (May); City of Toronto, $12,610,000 (June); City of Vancouver, $9,350,000 (September); Greater Vancouver Water District, $3,500,000 (October); City of Hamilton, $4,489,715 (November); City of Ottawa, $3,417,000 (December); and Township of Scarborough, $3,710,215 (December).

During 1953, corporate financing totalled $336,295,800, a decline of $237,243,200 from the $573,539,000 total for 1952. Largest single issue (at $60,000,000) in this classification was sold in the United States for the Interprovincial Pipe Line Company. The money was borrowed to help finance an extension from Lake Superior to Sarnia, Ont.

Other prominent borrowers in the corporate field were: Bathurst Power and Paper Co. Limited, $6,000,000; Canadian Canners Limited, $4,000,000; Cockshutt Farm Equipment Limited, $5,000,000; Credit Foncier Franco-Canadien, $3,000,000; Dominion Tar and Chemical Company Limited, $7,500,000; The T. Eaton Realty Company Limited, $17,500,000; Empire Brass Manufacturing Company Limited, $4,000,000; General Motors Acceptance Corporation of Canada, $25,000,000; General Steel Wares Limited, $2,500,000; Industrial Acceptance Corporation Limited, $15,000,000; Loblaw Groceterias Company Limited, $8,000,000; Phillips Electrical Company Limited, $9,000,000; Simpsons-Sears Limited, $15,000,000; Steinberg's Limited, $2,500,000; Traders Finance Corporation Limited, $12,000,000; B.C. Telephone Company, $7,000,000; Manicouagan Power Company, $10,000,000; North Star Oil Limited, $5,000,000; Permian Basin Pipeline Company, $34,125,000; Union Gas Company of Canada Limited, $8,000,000; and George Weston Limited, $8,000,000.

Financing for the Canadian transportation industry in 1953 amounted to $47,100,000, an increase of more than $10,000,000 over 1952. The largest issue of any concern in this industry was for $25,000,000 in equipment trust certificates of the Canadian Pacific Railway. In addition, however, flotations were made by Montreal Transportation Commission for $18,000,000 and by Sun Steamships Limited for $4,100,000. Since 1951, the Canadian National Railways has made arrangements to have funds provided by the Government of Canada and has not been a large borrower in the open market.

A directory of all "Security Issues Placed During 1953" has been published in *The Monetary Times, Annual National Review, 1954*. This list indicates that four federal issues (excluding all short-term financing of less than one year), 23 provincial and guaranteed issues, 557 municipal issues (including parochial and miscellaneous) and 75 corporation issues were placed in 1953. For 1952, the same source, dated 1953, indicates that two federal issues, 25 provincial and guaranteed issues, 589 municipal issues and 77 corporation issues were placed.

Thus, 659 new issues of all classifications were sold in 1953 compared with 693 in 1952. Though the total number declined by 34, the dollar amount increased by $917,260,525 from $2,028,228,140 to $2,945,488,665. This greater dollar amount, however, was partly explained by an increase from $380,761,100 for Savings Loan Series VII (1952) to $850,548,900 for Savings Loan Series VIII (1953) or by $469,787,800 in this one form of financing alone.

6.—Sales of and Applications for Federal Government Bonds, Feb. 1, 1940, to Nov. 1, 1953

(Source: *The Monetary Times*)

Type and Date of Loan	Purchases by Individuals	Purchases by Corporations	Total Cash Sales	Applications
	$'000	$'000	$'000	No.
War Loans—				
Feb. 1, 1940	132,000	68,000	200,000	178,363
Oct. 1, 1940	113,000	187,000	300,000	150,890
Victory Loans—				
June 15, 1941	279,500	450,900	730,400	968,259
Mar. 1, 1942	335,600	507,500	843,100	1,681,267
Nov. 1, 1942	374,600	616,800	991,400	2,032,154
May 1, 1943	529,500	779,200	1,308,700	2,668,420
Nov. 1, 1943	599,700	775,300	1,375,000	3,033,051
May 1, 1944	641,500	763,500	1,405,000	3,077,123
Nov. 1, 1944	766,400	751,200	1,517,600	3,327,315
May 1, 1945	836,300	732,600	1,563,619[1]	3,178,275
Nov. 1, 1945	1,221,342	801,132	2,027,487[1]	2,947,636
	$		$	
Savings Loans—[2]				
Nov. 1, 1946	535,285,550	—	535,285,550	1,248,444
Nov. 1, 1947	287,733,100	—	287,733,100	910,742
Nov. 1, 1948	260,491,150	—	260,491,150	862,686
Nov. 1, 1949	320,200,000	—	320,200,000	1,015,579
Nov. 1, 1950	285,600,000	—	285,600,000	963,048
Nov. 1, 1951	394,642,400	—	394,642,400	986,900
Nov. 1, 1952	380,761,100	—	380,761,100	982,274
Nov. 1, 1953	850,548,900	—	850,548,900	1,267,506

[1] Department of Finance figures. [2] Total subscriptions were limited to $2,000 for any one individual for the 1946 issue, $1,000 for the issues of 1947-50, inclusive, and $5,000 for the issues of 1951, 1952, and 1953. Figures for the issues 1946-53 are for the entire loans, i.e., either to the year-end or to the closing date in subsequent years.

7.—Sales of Canadian Bonds, by Class of Bond and Country of Sale, 1944-53

(Source: *The Monetary Times*)

Note.—Figures for 1904-25 are given in the 1933 Year Book, p. 921, and for 1926-43 in the 1946 edition, pp. 990-991.

Year	Class of Bond					
	Federal[1]	Provincial	Municipal	Parochial and Miscellaneous	Corporation	Total
	$	$	$	$	$	$
1944	3,400,963,900	67,153,500	113,225,635	10,612,100	92,063,900	3,684,019,035
1945	3,577,691,000	162,002,084	30,430,210	10,952,500	153,900,000	3,934,975,794
1946	985,285,550	114,296,800	140,815,491	43,155,800	581,499,188	1,865,052,829
1947	293,333,100	229,562,000	238,887,410	14,968,600	379,674,500	1,156,425,610
1948	445,491,150	312,619,500	84,014,291	21,010,000	310,506,000	1,173,640,941
1949	790,200,000	449,347,000	134,796,184	23,853,200	285,268,000	1,683,464,384
1950	2,167,600,000	373,824,500	150,369,281	30,466,369	431,180,303	3,153,440,453
1951	594,642,400	369,532,000	196,438,916	37,967,921	451,630,000	1,650,211,237
1952	830,761,100	426,973,000	147,690,940	49,264,100	573,539,000	2,028,228,140
1953	1,950,548,900	436,616,900	186,784,460	35,242,605	336,295,800	2,945,488,665

[1] Excludes treasury bills, deposit certificates and other financing for a term of less than one year.

7.—Sales of Canadian Bonds, by Class of Bond and Country of Sale, 1944-53
—concluded

Year	Country of Sale			
	Canada[1]	United States	United Kingdom	Total
	$	$	$	$
1944	3,629,004,035	55,015,000	—	3,684,019,035
1945	3,854,957,794	80,018,000	—	3,934,975,794
1946	1,801,400,829	63,652,000	—	1,865,052,829
1947	1,068,114,610	88,311,000	—	1,156,425,610
1948	1,023,640,941	150,000,000	—	1,173,640,941
1949	1,543,464,384	140,000,000	—	1,683,464,384
1950	2,980,740,453	172,700,000	—	3,153,440,453
1951	1,266,188,237	384,023,000	—	1,650,211,237
1952	1,743,578,115	284,650,025	—	2,028,228,140
1953	2,638,889,450	306,599,215	—	2,945,488,665

[1] Excludes treasury bills, deposit certificates and other financing for a term of less than one year.

CHAPTER XXVII.—INSURANCE*

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

Insurance, for the purpose of statistical analysis, is usually classified as fire, life and casualty. Most companies operate under Federal Government registration although some have provincial licences only. Also, many fraternal orders and societies are engaged in this kind of business. Special articles relating to insurance that have appeared in previous editions of the Year Book are listed in Part II of Chapter XXIX under the heading "Insurance".

Section 1.—Fire Insurance

In Canada, fire insurance began with the establishment of agencies by British fire insurance companies. These, situated usually at the seaports, were operated by local merchants. The oldest existing agency of such a company commenced business at Montreal in 1804. The first Canadian company dates from 1809 and the first United States company to operate in Canada commenced business in 1821. A short account of the inception of fire insurance in Canada is given in the 1941 Year Book, pp. 846-847.

The report of the Superintendent of Insurance for the year ended Dec. 31, 1953, shows that, at that date, there were 290 fire insurance companies under federal registration; of these, 73 were Canadian, 86 were British and 131 were foreign companies. In 1875, the first year for which authentic records were collected by the Department of Insurance, 27 companies operated in Canada—11 Canadian,

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* Material in this Chapter, except as otherwise indicated, has been revised under the direction of K. R. MacGregor, Superintendent of Insurance, Department of Insurance, Ottawa.

13 British and 3 United States. The proportionate increase in the number of British and foreign companies from 59 p.c. to 75 p.c. of the total number is a very marked point of difference between the fire and life insurance businesses in Canada, the latter being carried on very largely by Canadian companies.

Subsection 1.—Total Registered Fire Insurance in Force in Canada

Of the total amount of fire insurance written in Canada during each year, a part is sold by the companies holding provincial licences and permits. Such companies generally confine their operations to the province of incorporation but may be allowed to sell insurance in other provinces. As shown in Table **1**, fire insurance companies under Federal registration account for approximately 90 p.c. of the fire insurance in force.

1.—Fire Insurance Transacted in Canada, 1951-53

Item		Gross Insurance Written	Net in Force at End of Year	Net Premiums Written	Net Claims Incurred
		$	$	$	$
Federal Government Registrations.	1951	32,903,960,900	33,490,653,184	134,496,218	52,086,541
	1952	35,371,554,787	37,317,499,723	139,777,732	61,124,918
	1953	41,091,691,709	41,703,092,570	145,971,915	66,755,144
Provincial Licensees—					
(a) Provincial companies within provinces by which they are incorporated..................	1951	1,911,928,015	2,638,121,340	10,374,025	5,501,009
	1952	1,908,809,507	2,574,996,679	10,782,628	5,322,188
	1953	2,318,389,997	2,977,148,786	12,670,659	6,670,976
(b) Provincial companies within provinces other than those by which they are incorporated.	1951	206,607,835	249,443,644	1,240,222	673,905
	1952	268,664,292	294,072,031	912,623	444,821
	1953	391,621,441	417,257,445	881,781	370,798
Totals, Provincial Licensees...	1951	2,118,535,850	2,887,564,984	11,614,247	6,174,914
	1952	2,177,473,799	2,869,068,710	11,695,251	5,767,009
	1953	2,710,011,438	3,394,406,231	13,552,440	7,041,774
Lloyds, London....................	1951	831,670,172	904,488,934	5,939,298	2,791,796
	1952	708,046,922	908,257,933	6,065,759	2,986,392
	1953	1,086,373,258	1,111,987,781	7,153,177	3,819,776
Grand Totals...............	**1951**	**35,854,166,922**	**37,282,707,102**	**152,049,763**	**61,053,251**
	1952	**38,257,075,508**	**41,094,826,366**	**157,538,742**	**69,878,319**
	1953	**44,888,076,405**	**46,209,486,582**	**166,677,532**	**77,616,694**

Subsection 2.—Operational Statistics of Fire Insurance Companies under Federal Registration

The trend in the average rate payable for fire insurance has been generally downward, although the increased fire losses in certain recent years have had the effect of checking that tendency. Moreover, the increase in value of insurable buildings and their contents tends to increase fire insurance premiums despite the downward trend of the average rate.

2.—Fire Insurance, by Companies Operating under Federal Government Registration, Decennially 1880-1940 and 1941-53

Note.—Figures for 1869-1900 are given in the 1939 Year Book, p. 973, and for 1901-39 in the 1942 edition, pp. 847-848.

Year	Amount in Force at End of Year	Net Premiums Written During Year	Net Claims Incurred During Year	Percentage of Claims to Premiums	Gross Amount of Risks Taken During Year	Premiums Charged Thereon	Average Cost per $100 of Insurance
	$	$	$	p.c.	$	$	$
1880...	411,563,271	3,479,577[1]	1,666,578[2]	47·90	384,051,861	3,958,437	1·03
1890...	720,679,621	5,836,071[1]	3,266,567[2]	55·97	620,723,945	7,019,319	1·13
1900...	992,332,360	8,331,948[1]	7,774,293[2]	93·31	803,428,654	10,031,735	1·25
1910...	2,034,276,740	18,725,531[1]	10,292,393[2]	54·96	1,817,055,685	24,684,296	1·36
1920...	5,969,872,278	50,527,937[1]	21,935,387[2]	43·41	6,790,670,610	71,143,917	1·05
1930...	9,672,996,973	52,646,520	30,427,968	57·71	10,311,193,608	82,700,147	0·80
1940...	10,737,568,226	41,922,312	15,444,927	36·84	12,072,174,014	72,682,679	0·60
1941...	11,386,819,286	49,305,539	17,814,322	36·13	13,345,610,185	85,877,389	0·64
1942...	12,565,212,694	47,272,440	20,360,534	43·07	12,759,419,939	84,168,663	0·66
1943...	13,386,782,873	47,153,094	22,181,244	47·04	12,838,807,204	84,047,821	0·65
1944...	14,174,130,630	55,027,051	28,921,930	52·56	14,572,876,024	96,065,279	0·66
1945...	15,054,848,612	58,335,728	30,585,357	52·43	10,096,447,893[3]	72,872,125	0·72
1946...	17,376,429,865	68,825,470	35,379,627	51·40	11,744,234,245[3]	82,696,662	0·70
1947...	19,926,683,282	86,774,952	39,513,014	45·54	15,452,832,219[3]	106,427,978	0·69
1948...	23,021,215,478	98,191,514	45,143,565	45·98	16,986,228,866[3]	119,222,396	0·70
1949...	25,971,300,213	103,955,183	46,567,188	44·80	17,618,541,153[3]	129,711,596	0·74
1950...	28,957,395,702	115,648,449	58,524,685	50·61	19,870,295,002[3]	143,661,997	0·72
1951...	33,490,653,184	134,496,218	52,086,541	38·73	23,569,483,733[3]	166,791,056	0·71
1952...	37,317,499,723	139,777,732	61,124,918	43·73	24,754,216,365[3]	172,398,726	0·70
1953...	41,703,092,570	145,971,915	66,755,144	45·73	28,482,966,982[3]	189,037,552	0·66

[1] Net premiums received. [2] Net claims paid. [3] Not comparable with 1944 and previous years since this figure indicates "Gross direct written", disregarding all reinsurance, assumed or ceded.

Premiums Written and Claims Incurred.—The relationship of claims incurred to premiums written is shown in Table 3 for Federal Government registered fire insurance companies, by province.

3.—Net Premiums Written and Net Claims Incurred in Canada by Canadian, British and Foreign Companies Operating under Federal Government Registration, by Province, 1952 and 1953.

(Registered reinsurance deducted)

Year and Province	Canadian Companies		British Companies		Foreign Companies	
	Premiums	Claims	Premiums	Claims	Premiums	Claims
	$	$	$	$	$	$
1952						
Newfoundland	239,084	125,246	1,110,177	562,530	365,723	273,113
Prince Edward Island	165,967	68,084	369,319	78,192	177,445	142,515
Nova Scotia	1,554,069	415,930	2,463,502	634,142	1,386,875	485,297
New Brunswick	1,155,555	415,455	2,358,220	1,016,918	1,499,794	877,345
Quebec	10,506,551	4,462,218	14,823,796	6,969,943	16,399,959	6,820,789
Ontario	14,535,164	6,276,489	17,744,222	10,233,831	20,114,885	10,239,868
Manitoba	3,063,851	1,194,840	2,171,545	875,724	2,285,497	712,746
Saskatchewan	2,903,620	1,004,589	1,464,729	552,852	1,862,022	621,837
Alberta	3,335,144	1,010,945	3,644,871	1,193,910	3,801,246	1,064,932
British Columbia	3,188,695	1,139,393	5,537,962	2,182,779	6,400,629	2,442,231
All other Canada[1]	236,095	−20,495	224,130	156,371	55,343	47,350
Canada, 1952	**40,883,795**	**16,092,694**	**51,912,473**	**24,457,192**	**54,349,418**	**23,728,023**

For footnote, *see* end of table.

3.—Net Premiums Written and Net Claims Incurred in Canada by Canadian, British and Foreign Companies Operating under Federal Government Registration, by Province, 1952 and 1953—concluded.

Year and Province	Canadian Companies		British Companies		Foreign Companies	
	Premiums	Claims	Premiums	Claims	Premiums	Claims
	$	$	$	$	$	$
1953						
Newfoundland	280,089	95,036	1,152,327	424,381	425,810	201,594
Prince Edward Island	157,745	23,195	328,094	42,822	161,066	7,699
Nova Scotia	1,644,943	605,644	2,504,532	1,266,441	1,337,618	715,436
New Brunswick	1,218,919	461,919	2,224,638	987,300	1,332,557	621,338
Quebec	11,924,834	5,858,624	16,472,192	8,398,164	16,001,848	8,790,622
Ontario	17,041.598	7,306,536	18,994,615	10,214,979	20,685,389	9,655,838
Manitoba	3,174,584	1,465,176	2,150,468	1,501,734	2,269,822	1,212,376
Saskatchewan	3,309,364	861,317	1,477,536	325,979	1,879,268	567,374
Alberta	3,616,385	1,290,143	3,729,848	1,441,983	3,676,899	1,325,182
British Columbia	3,544,802	1,038,444	5,175,523	1,818,883	6,045,504	1,941,663
All other Canada[1]	331,549	−9,096	27,426	105,327	312,195	7,916
Canada, 1953	**46,244,812**	**18,996,938**	**54,237,199**	**26,527,993**	**54,127,976**	**25,047,038**

[1] Includes the Yukon and Northwest Territories, also certain 'floater' business that cannot be apportioned to any one province.

Classification of Fire Risks.—The Department of Insurance compiles, from information supplied by the fire insurance companies registered to transact business in Canada, tables of experience as to premiums and claims by 21 classes of risks. The experience of 1951 and 1952 is given in Table 4.

4.—Percentage of Claims Incurred to Premiums Written in Canada, by All Companies Operating under Federal Government Registration, by Class of Risk, 1951 and 1952.

(Excluding all reinsurance ceded or assumed)

Class of Risk	1951	1952	Class of Risk	1951	1952
	p.c.	p.c.		p.c.	p.c.
Dwellings, excluding farms—					
Protected brick	50·08	40·74	Lumber yards, pulpwood and standing timber	17·73	26·50
Protected frame	35·00	36·57	Wood-working plants	40·41	43·23
Unprotected	39·47	42·40	Metal-working plants, garages and hangars	45·83	45·52
Farm buildings	48·26	48·73	Mining risks	52·69	19·07
Churches, public buildings, educational and social - service institutions	46·00	36·83	Railway and public utility risks	33·10	37·63
Warehouses	33·25	39·10	Miscellaneous manufacturing risks	48·63	54·15
Retail stores, office buildings, banks and hotels	52·23	51·46	Miscellaneous non - manufacturing risks	43·30	42·69
Contents of above item	49·14	45·17	Sprinklered risks of whatever nature or occupancy	23·03	42·68
Foods, food and beverage plants	37·28	71·56	Use and occupancy and profits, excluding rental insurance	32·57	34·85
Flour and cereal mills, grain elevators	28·54	145·86			
Oil risks of all kinds	34·27	30·60			
Saw and shingle mills	54·06	45·12	**Averages**	**40·24**	**45·59**

Subsection 3.—Finances of Fire Insurance Companies under Federal Registration

Tables 5 to 7 show the assets, liabilities, income and expenditure of registered companies transacting fire insurance in Canada from 1949 to 1953. The majority of fire insurance companies also transact casualty insurance dealt with in Section 3 of this Chapter. Totals only are given here because it is impossible for such companies to allocate their assets and liabilities and their general income and expenditure among the various types of business transacted. Table **28**, p. 1248, gives similar information for registered companies whose transactions are confined to casualty insurance.

5.—Assets of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1949-53.

Assets	1949	1950	1951	1952	1953
	$	$	$	$	$
Canadian Companies (In All Countries)					
Real estate	2,010,983	2,890,580	4,995,436	5,593,805	6,255,956
Loans on real estate	4,342,868	4,503,686	4,638,405	5,246,897	5,807,459
Bonds, debentures and stocks	134,327,602	146,468,315	156,851,549	170,943,515	202,535,243
Agents' balances and premiums outstanding	13,406,599	15,864,962	18,047,447	20,311,328	23,925,966
Cash	17,118,676	17,768,620	20,292,975	25,163,593	26,096,937
Interest and rents	924,946	1,011,235	1,166,123	1,307,241	1,563,005
Other assets	7,728,925	9,985,911	9,571,384	12,567,762	13,695,597
Totals, Canadian Companies	**179,860,599**	**198,493,309**	**215,563,319**	**241,134,141**	**279,880,163**
British Companies (In Canada)					
Real estate	856,789	961,944	1,181,210	1,194,861	1,926,911
Loans on real estate	85,699	164,226	302,606	432,799	555,487
Bonds, debentures and stocks	87,688,448	97,514,151	104,060,718	116,251,691	137,102,887
Agents' balances and premiums outstanding	10,776,448	12,954,003	14,205,780	16,505,580	18,093,533
Cash	12,513,078	13,221,377	15,711,722	17,393,338	16,390,340
Interest and rents	347,294	392,966	455,366	578,566	813,580
Other assets in Canada	2,234,250	2,372,038	2,264,071	4,221,756	3,393,573
Totals, British Companies	**114,502,006**	**127,580,705**	**138,181,473**	**156,578,591**	**178,276,311**
Foreign Companies (In Canada)					
Real estate	—	—	—	—	120,715
Loans on real estate	—	—	2,500	9,620	49,562
Bonds, debentures and stocks	71,122,550	78,612,365	97,101,459	103,138,393	115,086,150
Agents' balances and premiums outstanding	7,513,224	8,825,587	10,778,167	11,939,796	13,291,023
Cash	19,102,039	19,236,339	20,275,628	19,343,848	17,756,320
Interest and rents	415,671	454,347	617,072	730,838	855,602
Other assets in Canada	854,642	1,036,804	978,455	995,483	1,445,365
Totals, Foreign Countries	**99,008,126**	**108,165,442**	**129,753,281**	**136,157,978**	**148,604,737**

6.—Liabilities of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1949-53.

Liabilities	1949	1950	1951	1952	1953
	$	$	$	$	$
Canadian Companies (In All Countries)					
Reserve for unsettled claims	24,392,136	28,705,334	33,587,225	39,243,044	46,360,141
Reserve of unearned premiums	48,652,678	54,957,195	61,181,368	72,835,541	84,143,924
Sundry items	26,801,982	30,700,595	34,251,492	38,447,531	45,012,011
Totals, Canadian Companies	**99,846,796**	**114,363,124**	**129,020,085**	**150,526,116**	**175,516,076**
Excess of assets over liabilities	80,013,803	84,130,185	86,543,234	90,608,025	104,364,087
Capital stock paid up	20,334,030	20,972,569	21,650,941	21,821,506	26,794,015

6.—Liabilities of Canadian, British and Foreign Companies Transacting Fire Insurance or Fire and Casualty Insurance, under Federal Government Registration, 1949-53—concluded.

Liabilities	1949	1950	1951	1952	1953
	$	$	$	$	$
British Companies (In Canada)					
Reserve for unsettled claims	16,366,220	21,082,932	23,970,608	29,923,183	33,487,508
Reserve of unearned premiums	46,019,748	51,689,258	58,523,291	63,633,033	69,458,924
Sundry items	5,107,582	6,084,969	7,148,429	8,929,705	9,530,557
Totals, British Companies	**67,493,550**	**78,857,159**	**89,642,328**	**102,485,921**	**112,476,989**
Excess of assets over liabilities	47,008,456	48,723,546	48,539,145	54,092,670	65,799,322
Foreign Companies (In Canada)					
Reserve for unsettled claims	8,117,476	12,433,787	16,611,126	19,635,404	21,352,080
Reserve of unearned premiums	39,884,410	46,992,438	54,736,519	57,069,975	67,054,303
Sundry items	4,511,813	4,857,331	8,801,763	12,031,608	8,206,389
Totals, Foreign Companies	**52,513,699**	**64,283,556**	**80,149,408**	**88,736,987**	**96,612,772**
Excess of assets over liabilities, excluding capital	46,494,427	43,881,886	49,603,873	47,420,991	51,991,965

7.—Income and Expenditure of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1949-53.

Income	1949	1950	1951	1952	1953
	$	$	$	$	$
INCOME					
Canadian Companies (In All Countries)					
Net premiums written, fire and other insurance	85,967,103	94,957,384	108,123,353	130,971,373	150,232,977
Interest, dividends and rents earned	4,519,974	5,064,567	5,580,820	6,162,349	7,257,165
Sundry items	41,887	176,657	69,074	91,689	50,323
Totals, Canadian Companies	**90,528,964**	**100,198,608**	**113,773,247**	**137,225,411**	**157,540,465**
British Companies (In Canada)					
Net premiums written	75,168,266	84,262,573	95,563,249	104,718,151	114,579,615
Interest, dividends and rents earned	1,152,406	1,402,786	1,588,046	1,879,278	2,394,320
Sundry items	609	484	1,080	683	−1,966
Totals, British Companies	**76,321,281**	**85,665,843**	**97,152,375**	**106,598,112**	**116,971,969**
Foreign Companies (In Canada)					
Net premiums written	55,433,534	65,299,390	88,814,365	96,400,962	99,870,745
Interest, dividends and rents earned	1,733,103	1,897,135	2,390,403	2,841,987	3,074,211
Sundry items	−12,727	15,541	1,858	306	4,490
Totals, Foreign Companies	**57,153,910**	**67,212,066**	**91,206,626**	**99,243,255**	**102,949,446**

7.—Income and Expenditure of Canadian, British and Foreign Companies Transacting Fire Insurance, or Fire and Casualty Insurance, under Federal Government Registration, 1949-53—concluded.

Expenditure	1949	1950	1951	1952	1953
	$	$	$	$	$
EXPENDITURE					
Canadian Companies (In All Countries)					
Incurred for claims (fire)	12,981,810	15,862,354	15,234,667	16,838,349	19,600,009
General expenses (fire)	13,105,812	14,324,556	14,805,015	17,326,626	19,747,276
Incurred for claims (casualty)	26,516,804	30,978,046	39,134,232	46,145,163	52,465,514
General expenses (casualty)	19,489,615	21,840,069	26,733,771	31,377,886	35,337,754
Dividends or bonuses to shareholders	1,875,511	1,994,347	2,163,564	1,744,884	2,135,132
Premium taxes and fees	2,206,998	2,402,244	2,741,200	3,263,691	3,633,653
Income tax	1,621,510	1,573,799	2,666,768	3,023,178	4,093,395
Excess profits tax	−19,612	1,064	—	—	—
Provincial corporation income tax	87,374	90,506	158,832	3,539	1,840
Dividends to policyholders	411,938	238,828	337,463	423,210	510,326
British and foreign taxes	512,165	480,858	429,629	194,844	398,337
Totals, Canadian Companies	**78,789,925**	**89,786,671**	**104,405,141**	**120,341,370**	**137,923,236**
Excess of income over expenditure	11,739,039	10,411,937	9,368,106	16,884,041	19,617,229
British Companies (In Canada)					
Incurred for claims (fire)	18,484,144	24,094,197	21,419,537	24,457,192	26,527,993
General expenses (fire)	16,867,513	18,796,326	20,450,532	21,716,054	22,970,000
Incurred for claims (casualty)	16,071,566	19,016,349	24,491,516	28,222,840	30,316,653
General expenses (casualty)	12,874,637	14,634,521	17,565,922	19,924,643	21,853,236
Premium taxes and fees	1,981,533	2,165,783	2,456,255	2,645,281	2,864,731
Income tax	342,216	270,200	723,940	1,180,203	1,494,352
Excess profits tax	15	−787	—	—	—
Provincial corporation income tax	12,555	8,569	23,725	−1,411	−2,579
Totals, British Companies	**66,634,179**	**78,985,158**	**87,131,427**	**98,144,802**	**106,024,386**
Excess of income over expenditure	9,687,102	6,680,685	10,020,948	8,453,310	10,947,583
Foreign Companies (In Canada)					
Incurred for claims (fire)	17,897,614	21,777,434	19,050,759	23,728,023	25,047,048
General expenses (fire)	13,899,819	16,120,209	18,385,823	19,317,717	21,162,232
Incurred for claims (casualty)	6,653,022	9,498,697	19,270,657	23,253,049	25,659,436
General expenses (casualty)	5,731,607	7,048,391	11,810,013	13,805,059	15,260,850
Premium taxes and fees	1,418,647	1,708,675	2,226,447	2,330,267	2,466,150
Income tax	797,193	444,131	1,184,098	1,237,088	807,381
Excess profits tax	395	—	—	—	—
Provincial corporation income tax	50,471	41,079	39,303	−1,571	−197
Dividends or savings credited to subscribers	3,527,772	3,435,151	5,269,798	5,264,013	1,243,501
Totals, Foreign Companies	**49,976,540**	**60,073,767**	**77,236,898**	**88,933,645**	**91,646,401**
Excess of income over expenditure	7,177,370	7,138,299	13,969,728	10,309,610	11,303,045

Subsection 4.—Fire Losses

Fire Losses.—The information in Tables **8** to **11**, which deals with the loss of property and life caused by fire, has been summarized from the Statistical Bulletin of the Association of Canadian Fire Marshals and the Dominion Fire Prevention Association, prepared by the Dominion Fire Commissioner.

8.—Fire Losses in Canada, 1942-53

NOTE.—Figures for 1926-41 are given in the 1947 Year Book, p. 1078. Earlier figures from 1898 may be obtained from the Department of Insurance.

Year	Fires Reported	Property Loss[1]	Loss per Capita	Deaths by Fire	Year	Fires Reported	Property Loss[1]	Loss per Capita	Deaths by Fire
	No.	$	$	No.		No.	$	$	No.
1942	47,596	31,182,238	2·70	304	1948	53,048	67,144,473	5·21	493
1943	47,594	31,464,710	2·67	319	1949	54,500	65,159,044	4·94	542
1944	50,719	40,562,478	3·39	307	1950[2]	59,710	81,525,298	5·88	441
1945	52,173	41,903,020	3·46	391	1951	60,317	76,919,357	5·64	535
1946	55,400	49,413,363	4·01	408	1952	64,057	80,690,123	5·74	572
1947	52,931	57,050,461	4·53	390	1953	67,519	84,270,896	5·70	477

[1] Excludes federal jurisdiction losses, including forests, except for 1942. [2] Includes Newfoundland for 1950 only.

9.—Fire Losses, by Province, 1948-53

Province or Territory	1948	1949	1950	1951	1952	1953
	$	$	$	$	$	$
Newfoundland	...	...	660,100	..	..	..
Prince Edward Island	301,275	588,017	422,534	725,893	475,265	231,616
Nova Scotia	2,716,983	2,441,016	3,149,464	4,547,955	2,097,216	2,957,326
New Brunswick	2,819,962	2,850,007	3,016,191	2,865,881	3,320,340	2,993,167
Quebec	25,000,745	20,490,505	32,962,910	25,933,975	26,774,705	31,676,545
Ontario	20,557,149	20,237,896	22,619,343	23,241,177	27,615,682	25,882,184
Manitoba	2,693,868	2,243,589	3,636,631	2,377,092	2,667,303	4,279,618
Saskatchewan	2,105,561	2,997,610	2,640,021	2,776,614	3,525,799	2,372,885
Alberta	3,634,160	5,299,584	5,242,553	4,661,963	4,545,444	5,652,339
British Columbia	7,147,720	7,556,229	7,052,706	8,604,426	9,603,231	8,080,490
Yukon and N.W.T.	167,050	454,591	122,845	1,184,381	65,138	144,726
Canada[1]	**67,144,473**	**65,159,044**	**81,525,298**	**76,919,357**	**80,690,123**	**84,270,896**

[1] Excludes federal jurisdiction losses, including forests.

The provincial property losses for 1948-53 given in Table **9** include both insured and uninsured losses. The percentages of the provincial totals uninsured in 1953 were: Prince Edward Island, 44; Nova Scotia, 22; New Brunswick, 33; Quebec, 17; Ontario, 20; Manitoba, 17; Saskatchewan, 26; Alberta, 28; British Columbia, 41; and the Yukon and Northwest Territories, 56. Uninsured losses formed 22 p.c. of total losses for Canada.

10.—Fire Losses, by Type of Property, 1951-53

(Exclusive of Newfoundland)

Type of Property	1951		1952		1953	
	Fires Reported	Property Loss	Fires Reported	Property Loss	Fires Reported	Property Loss
	No.	$	No.	$	No.	$
Residential	44,673	19,892,811	47,732	18,387,258	45,350	17,775,863
Mercantile	6,217	18,907,864	6,756	23,969,142	6,265	20,203,222
Farm	3,563	5,571,199	1,367	13,471,727	4,316	6,852,856
Manufacturing	1,818	16,538,095	3,685	6,036,451	1,036	15,254,972
Institutional and assembly	819	5,934,185	715	4,197,097	827	2,908,444
Miscellaneous	3,227	10,075,203	3,802	14,628,448	9,725	21,275,539
Totals	**60,317**	**76,919,357**	**64,057**	**80,690,123**	**67,519**	**84,270,896**

11.—Value of Property Loss, by Reported Cause of Fire, 1951-53

(Exclusive of Newfoundland)

Reported Cause	1951		1952		1953	
	Fires Reported	Property Loss	Fires Reported	Property Loss	Fires Reported	Property Loss
	No.	$	No.	$	No.	$
Smokers' carelessness	21,192	3,515,329	24,080	3,656,246	26,701	4,074,463
Stoves, furnaces, boilers and smoke pipes	6,652	5,135,132	6,221	4,404,263	6,156	4,861,335
Electrical wiring and appliances	5,513	8,284,017	5,585	10,772,833	5,768	8,994,851
Matches	2,532	711,121	2,466	957,104	2,480	1,347,408
Defective and overheated chimneys and flues	2,573	2,409,573	2,407	2,121,604	2,352	1,957,689
Hot ashes, coals and open fires	2,118	1,347,192	2,141	2,017,627	1,560	1,684,169
Petroleum and its products	2,124	2,548,450	1,357	3,017,787	2,021	2,619,905
Lights, other than electric	1,329	2,459,274	1,188	1,135,813	1,267	934,577
Lightning	1,344	1,116,786	1,403	913,653	1,904	1,293,879
Sparks on roofs	725	423,653	707	499,239	491	627,060
Exposure fires	587	2,084,081	608	1,236,021	494	746,803
Spontaneous ignition	386	1,594,857	416	2,233,477	360	1,436,377
Incendiarism	250	1,372,244	282	1,363,519	448	1,747,956
Miscellaneous known causes (explosions, fireworks, friction, hot grease or metal, steam and hot water pipes, etc.)	5,481	6,493,696	7,353	6,039,108	7,442	7,138,855
Unknown	7,511	37,423,952	7,843	40,321,829	8,075	44,805,569
Totals	**60,317**	**76,919,357**	**64,057**	**80,690,123**	**67,519**	**84,270,896**

Section 2.—Life Insurance

Life insurance in force in Canada, in companies registered by the Federal Government (exclusive of fraternal societies), was over $21,227,000,000 at the end of 1953, an increase of over $2,136,000,000 during the year. There was not only an increase in new business, but also a greater stability in business written compared with earlier years. The effect of these factors is reflected in the ratio of gain in business in force expressed as a percentage of the amount in force at the beginning of the same year.

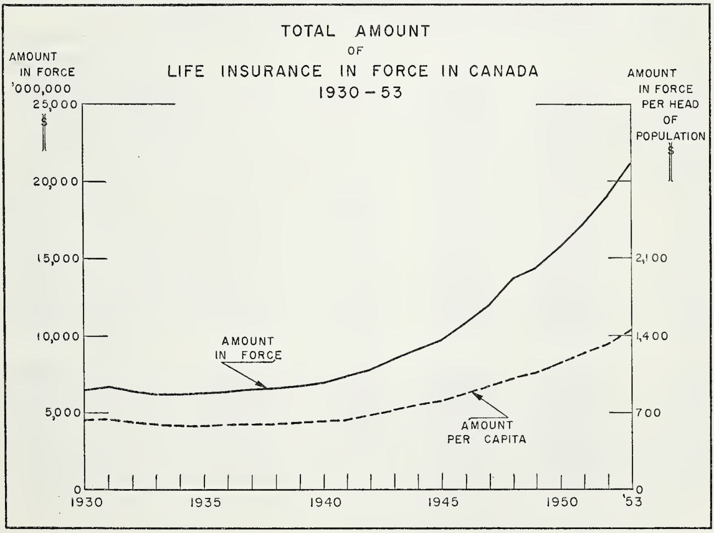
Year	*Net in Force at Beginning of Year*	*Net Increase in Force for the Year*	*Percentage Gain*
	$	$	
1930	6,157,000,000	335,000,000	5·4
1935	6,221,000,000	38,000,000	0·6
1940	6,776,000,000	199,000,000	2·9
1945	9,139,000,000	612,000,000	6·7
1946	9,751,000,000	1,061,000,000	10·9
1947	10,812,000,000	1,088,000,000	10·1
1948	11,900,000,000	1,205,000,000	10·1
1949	13,105,000,000	1,303,000,000	9·9
1950	14,409,000,000	1,337,000,000	9·3
1951	15,746,000,000	1,490,000,000	9·5
1952	17,236,000,000	1,855,000,000	10·8
1953p	19,091,000,000	2,136,000,000	11·2

Subsection 1.—Total Registered Life Insurance in Force in Canada

In addition to the business transacted by life insurance companies registered by the Federal Government, a considerable volume of business is also transacted by companies licensed by the provinces. Table **12** summarizes the volume of business transacted in Canada by Canadian, British and foreign life insurance companies and fraternal societies, whether registered by the Federal Government or licensed by the provinces.

12.—Life Insurance Transacted in Canada, 1953p

Business Transacted by—	New Policies Effected (net)	Net Insurance in Force, Dec. 31	Net Premiums Received	Net Claims Paid
	$	$	$	$
Federal Government Registrations—				
Life companies	2,554,802,966	21,226,905,619	454,786,332	136,827,798
Fraternal societies	48,111,925	327,128,745	6,281,822	4,110,374
Totals, Federal Government Registrations	**2,602,914,891**	**21,554,034,364**	**461,068,154**	**140,938,172**
Provincial Registrations—				
Provincial Companies within Province by which they are Incorporated—				
Life companies	149,611,881	689,247,371	15,111,667	3,282,966
Fraternal societies	37,746,693	216,716,984	4,762,307	3,200,913
Provincial Companies in Provinces other than those by which they are Incorporated—				
Life companies	19,713,180	85,482,913	2,000,498	341,818
Fraternal societies	17,027,693	102,121,365	1,778,578	1,321,142
Totals, Provincial Registrations	**224,099,447**	**1,093,568,633**	**23,653,050**	**8,146,839**
Grand Totals	**2,827,014,338**	**22,647,602,997**	**484,721,204**	**149,085,011**
Canadian Life Companies—				
Federal	1,751,620,418	14,526,740,295	303,034,117	90,833,339
Provincial	169,325,061	774,730,284	17,112,165	3,624,784
Canadian Fraternal Societies—				
Federal	32,473,103	188,322,239	2,876,154	2,444,493
Provincial	54,774,386	318,838,349	6,540,885	4,522,055
British life companies	98,437,715	519,137,847	12,310,612	3,365,532
Foreign life companies	704,744,833	6,181,027,477	139,441,603	42,628,927
Foreign fraternal societies	15,638,822	138,806,506	3,405,668	1,665,881



Subsection 2.—Operational Statistics of Life Insurance Companies under Federal Registration

The net life insurance in force in all companies having federal registration was only $35,680,082 in 1869 and in 1953 it was $21,226,905,619.* The amount per capita of the estimated population of Canada has more than doubled since 1942—evidence of the general recognition of the value of life insurance for the adequate protection of dependants against misfortune. British life insurance companies in Canada, the leaders in 1869, have fallen far behind Canadian and foreign companies.

Life insurance business was transacted in Canada, during 1953, by 62 active companies having federal registration, including 31 Canadian, six British and 25 foreign companies. In addition to these active companies, there were seven British and three foreign companies writing little or no new insurance, their business being confined largely to the policies already on their books, and two foreign companies which were registered in 1952 and 1953 but had written no business in Canada.

The operations analysed in the tables of this Subsection, with the exception of Table **17**, include only those companies under federal registration and are exclusive of fraternal organizations and provincial licensees. However, as indicated in Table **12**, operations of the companies included account for about 97 p.c. of the life insurance in force in Canada.

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* This total does not include fraternal insurance.

13.—Life Insurance in Force and Effected in Canada by Companies under Federal Government Registration, Decennially 1880-1940 and 1941-53

NOTE.—Figures for 1869-1900 are given at p. 958 of the 1938 Year Book, and for 1901-39 at p. 855 of the 1942 edition. Statistics of fraternal society insurance, excluded here, are given at pp. 1239-1241.

Year	Net Amount in Force				Insurance in Force per Capita[1]	Net Amount of New Insurance Effected during Year
	Canadian Companies	British Companies	Foreign Companies	Total		
	$	$	$	$	$	$
1880	37,838,518	19,789,863	33,643,745	91,272,126	21·45	13,906,887
1890	135,218,990	31,613,730	81,591,847	248,424,567	51·98	39,802,956
1900	267,151,086	39,485,344	124,433,416	431,069,846	81·32	67,729,115
1910	565,667,110	47,816,775	242,629,174	856,113,059	122·51	150,785,305
1920	1,664,348,605	76,883,090	915,793,798	2,657,025,493	310·55	630,110,900
1930	4,319,370,209	117,410,860	2,055,502,125	6,492,283,194	636·00	884,749,748
1940	4,609,213,977	145,603,299	2,220,505,184	6,975,322,460	612·89	590,205,536
1941	4,835,925,659	145,597,309	2,367,027,774	7,348,550,742	638·62	688,344,283
1942	5,184,568,369	152,289,487	2,538,897,449	7,875,755,305	675·80	818,558,946
1943	5,586,515,285	162,287,617	2,785,290,816	8,534,093,718	723·53	887,522,851
1944	6,001,984,634	171,997,834	2,965,501,763	9,139,484,231	765·07	900,501,491
1945	6,440,615,383	183,779,511	3,126,645,941	9,751,040,835	807·74	1,002,576,955
1946	7,201,285,815	205,626,216	3,405,480,833	10,812,392,864	879·63	1,393,522,667
1947	7,964,185,291	238,614,767	3,697,458,162	11,900,258,220	948·15	1,453,255,487
1948	8,830,952,866	270,105,626	4,004,294,358	13,105,352,850	1,022·02	1,504,248,947
1949	9,808,084,850	306,032,801	4,294,644,199	14,408,761,850	1,071·52	1,636,356,612
1950	10,756,249,942	342,878,530	4,646,707,595	15,745,836,067	1,148·33	1,798,864,211
1951	11,807,992,826	391,382,883	5,036,207,593	17,235,583,302	1,230·32	1,990,926,006
1952	13,085,349,418	443,275,711	5,562,003,368	19,090,628,497	1,322·98	2,287,264,465
1953^{p}	14,526,740,295	519,137,847	6,181,027,477	21,226,905,619	1,436·09	2,554,802,966

[1] Based on estimates of population given at p. 137.

14.—Life Insurance Transacted in Canada by Companies under Federal Government Registration, 1951-53

Year and Nationality of Company	Policies Effected		Policies in Force		Net Premium Income	Net Claims Paid[1]
	No.	Net Amount	No.	Net Amount		
		$		$	$	$
1951						
Canadian	330,677	1,379,400,850	4,081,221	11,807,992,826	263,007,836	83,620,444
British	13,339	65,773,248	159,107	391,382,883	9,205,784	2,784,449
Foreign	368,400	545,751,908	4,932,225	5,036,207,593	121,805,759	42,084,191
Totals, 1951	**712,416**	**1,990,926,006**	**9,172,553**	**17,235,583,302**	**394,019,379**	**128,489,084**
1952						
Canadian	339,309	1,540,321,407	4,213,176	13,085,349,418	281,787,521	86,601,441
British	15,729	74,055,180	165,664	443,275,711	10,296,873	2,999,725
Foreign	362,194	672,887,878	4,984,719	5,562,003,368	130,613,829	40,415,685
Totals, 1952	**717,232**	**2,287,264,465**	**9,363,559**	**19,090,628,497**	**422,698,223**	**130,016,851**
1953p						
Canadian	346,505	1,751,620,418	4,350,926	14,526,740,295	303,034,117	90,833,339
British	17,741	98,437,715	173,508	519,137,847	12,310,612	3,365,532
Foreign	367,978	704,744,833	5,046,618	6,181,027,477	139,441,603	42,628,927
Totals, 1953p	**732,224**	**2,554,802,966**	**9,571,052**	**21,226,905,619**	**454,786,332**	**136,827,798**

[1] Death claims, matured endowments, disability claims and guaranteed dividends.

15.—Progress of Life Insurance Transacted in Canada by Companies under Federal Government Registration, 1951-53

Item		1951	1952	1953p
Canadian Companies—				
Policies effected	No.	330,677	339,309	346,505
Policies in force at end of each year	"	4,081,221	4,213,176	4,350,926
Policies become claims	"	35,594	34,216	34,189
Net amounts of policies effected	$	1,379,400,850	1,540,321,407	1,751,620,418
Net amounts of policies in force	$	11,807,992,826	13,085,349,418	14,526,740,295
Net amounts of policies become claims	$	82,328,160	84,608,862	89,826,401
Net amounts of premiums	$	263,007,836	281,787,521	303,034,117
Net claims paid[1]	$	83,620,444	86,601,441	90,833,339
Net outstanding claims	$	20,640,198	21,004,718	21,975,144
British Companies—				
Policies effected	No.	13,339	15,729	17,741
Policies in force at end of each year	"	159,107	165,664	173,508
Policies become claims	"	2,178	2,474	2,497
Net amounts of policies effected	$	65,773,248	74,055,180	98,437,715
Net amounts of policies in force	$	391,382,883	443,275,711	519,137,847
Net amounts of policies become claims	$	2,614,524	3,075,399	3,660,027
Net amounts of premiums	$	9,205,784	10,296,873	12,310,612
Net claims paid[1]	$	2,784,449	2,999,725	3,365,532
Net outstanding claims	$	895,807	934,760	1,011,099
Foreign Companies—				
Policies effected	No.	368,400	362,194	367,978
Policies in force at end of each year	"	4,932,225	4,984,719	5,046,618
Policies become claims	"	77,492	59,666	59,066
Net amounts of policies effected	$	545,751,908	672,887,878	704,744,833
Net amounts of policies in force	$	5,036,207,593	5,562,003,368	6,181,027,477
Net amounts of policies become claims	$	39,473,379	37,657,765	40,657,096
Net amounts of premiums	$	121,805,759	130,613,829	139,441,603
Net claims paid[1]	$	42,084,191	40,415,685	42,628,927
Net outstanding claims	$	5,047,870	4,863,990	5,419,341

For footnote, *see* end of table.

15.—Progress of Life Insurance Transacted in Canada by Companies under Federal Government Registration, 1951-53—concluded

Item		1951	1952	1953p
All Companies—				
Policies effected	No.	712,416	717,232	732,224
Policies in force at end of each year	"	9,172,553	9,363,559	9,571,052
Policies become claims	"	115,264	96,356	95,752
Net amounts of policies effected	$	1,990,926,006	2,287,264,465	2,554,802,966
Net amounts of policies in force	$	17,235,583,302	19,090,628,497	21,226,905,619
Net amounts of policies become claims	$	124,416,063	125,342,026	134,143,524
Net amounts of premiums	$	394,019,379	422,698,223	454,786,332
Net claims paid[1]	$	128,489,084	130,016,851	136,827,798
Net outstanding claims	$	26,583,875	26,803,468	28,405,584

[1] Death claims, matured endowments, disability claims and guaranteed dividends.

16.—Ordinary, Industrial and Group Life Insurance Policies in Force and Effected in Canada by Companies under Federal Government Registration, 1953p

Type of Policy and Nationality of Company	New Policies Effected			Policies in Force		
	No.	Net Amount	Average Amount of a Policy	No.	Net Amount	Average Amount of a Policy
		$	$		$	$
Ordinary Policies						
Canadian	295,915	1,372,634,042	4,639	3,679,485	10,944,628,112	2,974
British	17,727	90,776,125	5,121	127,415	488,519,785	3,834
Foreign	156,797	457,815,606	2,920	1,767,578	3,401,957,797	1,925
Totals, Ordinary Policies	**470,439**	**1,921,225,773**	**4,084**	**5,574,478**	**14,835,105,694**	**2,661**
Industrial Policies						
Canadian	49,376	53,925,532	1,092	663,727	549,461,980	828
British	—	—	—	46,026	6,864,346	149
Foreign	210,017	97,658,805	465	3,274,021	1,111,051,796	339
Totals, Industrial Policies	**259,393**	**151,584,337**	**5,844**	**3,983,774**	**1,667,378,122**	**419**
Group Policies						
Canadian	1,214	325,060,844	267,760	7,714	3,032,650,203	393,136
British	14	7,661,590	547,256	67	23,753,716	354,533
Foreign	1,164	149,270,422	128,239	5,019	1,668,017,884	332,341
Totals, Group Policies	**2,392**	**481,992,856**	**201,502**	**12,800**	**4,724,421,803**	**369,095**

17.—Insurance Death Rates in Canada, 1951 and 1952

Type of Insurer	1951			1952		
	Policies Exposed to Risk	Policies Terminated by Death	Death Rate per 1,000	Policies Exposed to Risk	Policies Terminated by Death	Death Rate per 1,000
	No.	No.		No.	No.	
All companies, ordinary	5,076,773	26,704	5·3	5,268,296	27,741	5·3
All companies, industrial	4,040,181	29,952	7·4	4,018,506	31,089	7·7
Fraternal benefit societies	318,539	3,772	11·8	330,735	3,805	11·5
Totals	**9,435,493**	**60,428**	**6·4**	**9,617,537**	**62,635**	**6·5**

Subsection 3.—Finances of Life Insurance Companies under Federal Registration

The financial statistics of Tables **18**, **19** and **20** cover only life insurance companies under federal registration and do not include fraternal organizations and provincial licensees. The figures for British and foreign companies apply to their assets, liabilities and operations in Canada only, but assets and liabilities, income and expenditure of Canadian companies arise, in part, from business abroad.

18.—Total Assets of Canadian Life Insurance Companies under Federal Government Registration and Assets in Canada of British and Foreign Life Insurance Companies, 1951-53.

Assets	1951	1952	1953p
	$	$	$
Canadian Companies[1]			
Real estate	78,887,302	97,665,484	109,679,835
Real estate held under agreements of sale	6,657,216	5,510,182	4,686,259
Loans on real estate	995,049,083	1,131,090,247	1,311,912,475
Loans on collaterals	1,187,430	781,977	6,076
Policy loans	231,364,171	251,369,119	269,922,728
Bonds, debentures and stocks	3,376,145,802	3,513,589,434	3,653,785,976
Cash	68,727,248	64,527,802	60,608,269
Interest and rent due and accrued	41,164,995	44,911,936	49,750,353
Outstanding and deferred premiums	84,836,661	92,577,687	101,082,828
Other assets	4,630,090	4,938,537	6,826,051
Totals, Canadian Companies[2]	**4,888,649,998**	**5,206,962,405**	**5,568,260,850**
British Companies			
Real estate	2,364,590	2,641,780	3,020,861
Real estate held under agreements of sale	—	—	324,014
Loans on real estate	14,757,989	21,971,458	31,767,862
Loans on collaterals	—	—	—
Policy loans	3,194,625	3,632,317	3,942,796
Bonds, debentures and stocks	131,039,519	137,364,572	151,936,762
Cash	1,918,508	2,538,989	2,735,285
Interest and rent due and accrued	587,291	648,691	752,754
Outstanding and deferred premiums	1,110,502	1,043,095	1,900,276
Other assets	35,595	2,469	21,266
Totals, British Companies	**155,008,619**	**169,843,371**	**196,401,876**
Foreign Companies			
Real estate	1,430,226	1,409,635	1,412,754
Real estate held under agreements of sale	—	—	—
Loans on real estate	92,858,051	122,090,945	147,567,354
Loans on collaterals	—	—	—
Policy loans	49,083,364	51,486,848	53,694,019
Bonds, debentures and stocks	821,687,427	841,154,851	884,412,174
Cash	20,053,139	22,237,839	20,334,071
Interest and rent due and accrued	10,089,425	11,008,518	11,816,018
Outstanding and deferred premiums	19,887,488	20,529,924	22,257,089
Other assets	71,473	60,391	69,473
Totals, Foreign Companies	**1,015,160,593**	**1,069,978,951**	**1,141,562,952**

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[1] A detailed classification of assets showing investments of Canadian companies and giving the percentage of the total in each group and sub-group will be found in the *Report of the Superintendent of Insurance, Vol. II.*

[2] Book values, any excess of book over market values being covered by a reserve in the liabilities. (Since 1950, the amortized values of certain government securities have been used for this purpose, instead of their market values.)

19.—Total Liabilities of Canadian Life Insurance Companies under Federal Government Registration and Liabilities in Canada of British and Foreign Life Insurance Companies, 1951-53.

Liabilities	1951	1952	1953^{p}
	$	$	$
Canadian Companies			
Outstanding claims	39,069,264	37,535,217	38,666,462
Reserve under contracts in force	3,902,777,768	4,163,950,805	4,454,878,295
Sundry liabilities	712,846,092	754,375,955	803,263,183
Totals, Canadian Companies[1]	**4,654,693,124**	**4,955,861,977**	**5,296,807,940**
Surpluses of assets excluding capital	233,956,874	251,100,428	271,452,910
Capital stock paid up	13,522,230	13,624,050	13,733,760
British Companies			
Outstanding claims	895,807	934,761	1,011,099
Reserve under contracts in force	127,804,218	144,634,097	166,483,393
Sundry liabilities	1,853,835	2,117,872	2,186,452
Totals, British Companies	**130,553,860**	**147,686,730**	**169,680,944**
Surpluses of assets in Canada	24,454,759	22,156,641	26,720,932
Foreign Companies			
Outstanding claims	5,047,872	4,863,990	5,419,341
Reserve under contracts in force	859,855,285	909,626,409	961,416,146
Sundry liabilities	61,228,373	66,883,219	71,417,304
Totals, Foreign Companies	**926,131,530**	**981,373,618**	**1,038,252,791**
Surpluses of assets in Canada	89,029,063	88,605,333	103,310,161

[1] Excludes capital.

20.—Total Cash Income and Expenditure of Canadian Life Insurance Companies under Federal Government Registration and Cash Income and Expenditure in Canada of British and Foreign Life Insurance Companies, 1951-53.

Principal Items	1951	1952	1953^{p}
	$	$	$
INCOME			
Canadian Companies			
Net premium income	450,736,233	480,469,549	515,720,434
Consideration for annuities	102,418,595	92,987,615	107,093,390
Interest, dividends and rents	173,407,735	190,075,507	210,760,053
Sundry items	112,888,925	102,329,418	99,187,028
Totals, Canadian Companies	**839,451,488**	**865,862,089**	**932,760,905**
British Companies			
Net premium income	9,205,784	10,296,873	12,310,613
Consideration for annuities	12,786,710	15,018,904	17,154,657
Interest, dividends and rents	4,800,862	5,487,935	6,617,053
Sundry items	482,270	631,130	563,642
Totals, British Companies	**27,275,626**	**31,434,842**	**36,645,965**
Foreign Companies			
Net premium income	121,805,759	130,613,828	139,441,603
Consideration for annuities	6,594,265	6,668,312	6,090,975
Interest, dividends and rents	33,112,287	36,514,475	40,480,971
Sundry items	8,173,173	7,759,319	7,172,743
Totals, Foreign Companies	**169,685,484**	**181,555,934**	**193,186,292**

20.—Total Cash Income and Expenditure of Canadian Life Insurance Companies under Federal Government Registration and Cash Income and Expenditure in Canada of British and Foreign Life Insurance Companies, 1951-53—concluded.

Principal Items	1951	1952	1953p
	$	$	$
EXPENDITURE			
Canadian Companies			
Payments to policyholders	309,637,914	314,702,028	335,996,032
General expenses	152,528,929	145,007,467	157,151,601
Dividends to shareholders	3,098,473	2,333,499	2,448,852
Other disbursements	84,500,358	83,824,109	85,901,209
Totals, Canadian Companies	**549,765,674**	**545,867,103**	**581,497,694**
Excess of income over expenditure	289,685,814	319,994,986	351,263,211
British Companies			
Payments to policyholders	7,196,181	7,620,687	9,574,348
General expenses	4,103,989	4,775,836	5,539,121
Other disbursements	313,746	452,406	361,004
Totals, British Companies	**11,613,916**	**12,848,929**	**15,474,473**
Excess of income over expenditure	15,661,710	18,585,913	21,171,492
Foreign Companies			
Payments to policyholders	77,740,819	76,703,368	81,874,664
General expenses	32,555,983	34,785,773	36,606,261
Other disbursements	7,140,568	7,284,656	8,065,009
Totals, Foreign Companies	**117,437,370**	**118,773,797**	**126,545,934**
Excess of income over expenditure	52,248,114	62,782,137	66,640,358

Subsection 4.—Life Insurance Effected through Fraternal Benefit Societies

In addition to life insurance, some fraternal benefit societies grant other insurance benefits to members, notably sickness benefits, but these are relatively unimportant. Table **21** gives statistics of life insurance effected through fraternal benefit societies by Canadian members, together with statistics of assets, liabilities, income and expenditure relating to all business of Canadian societies and to the business in Canada of foreign societies. The rates charged by these societies are computed to be sufficient to provide the benefits granted, having regard for actuarial principles. The benefit funds of each society must be valued annually by a qualified actuary (Fellow, by examination, of the Institute of Actuaries of Great Britain, of the Faculty of Actuaries in Scotland, or of the Society of Actuaries) and a readjustment of rates or benefits must be made, unless the actuary certifies to the solvency of each fund. The statistics of the first section of Table **21** relate to the 16 Canadian societies reporting to the Department of Insurance of the Federal Government, of which only one does not grant life insurance benefits.

Under an amendment to the Insurance Act, effective Jan. 1, 1920, all foreign fraternal benefit societies were required to obtain authority from the Federal Government prior to transacting business in Canada. However, any such societies which at that date were transacting business under provincial licences, though forbidden to accept new members, were permitted to continue all necessary transactions in respect of insurance already in force. Most of these societies and some foreign societies that had not previously been licensed by the provinces have since obtained federal authority to transact business. Of both classes of societies, 32 transacted business in Canada during 1953; two of the societies do not grant life insurance benefits.

21.—Life Insurance in Canada of Fraternal Benefit Societies reporting to the Federal Department of Insurance, 1951-53

Item	1951	1952	1953p
	No.	No.	No.
CANADIAN SOCIETIES			
Net certificates effected	22,414	24,241	24,079
Net certificates become claims	2,919	2,884	2,973
	$	$	$
Net premium income	2,217,423	2,553,716	2,876,154
Net amounts of certificates effected	26,781,072	30,484,585	32,473,103
Net amounts in force	161,384,596	175,416,375	188,322,239
Net amounts of certificates become claims	2,427,850	2,412,465	2,475,261
Net benefits paid	2,927,899	2,972,682	3,126,373
Net outstanding claims	290,245	333,057	292,223
Gross Amounts Terminated by—			
Death	1,898,901	1,962,283	1,986,609
Surrender, expiry, lapse, etc	17,906,855	19,629,193	22,809,977
Totals, Terminated	19,805,756	21,591,476	24,796,586
Assets[1]			
Real estate	2,049,648	2,862,557	3,717,680
Real estate held under agreements of sale	842,537	1,316,075	757,249
Loans on real estate	10,387,061	9,674,176	10,169,873
Policy loans	3,850,314	3,876,709	3,924,045
Bonds, debentures and stocks	76,839,620	78,340,965	80,920,394
Cash	1,254,727	1,882,348	1,894,937
Interest and rent due and accrued	701,043	703,561	733,801
Dues from members	662,982	724,897	567,299
Other assets	217,788	229,856	243,589
Totals, Assets	**96,805,720**	**99,611,144**	**102,928,867**
Liabilities[1]			
Outstanding claims	377,295	417,080	359,541
Reserve under contracts in force	78,038,742	80,066,022	82,608,753
Other liabilities	10,484,943	11,094,787	11,330,061
Totals, Liabilities	**88,900,980**	**91,577,889**	**94,298,355**
Income[1]			
Premiums (for benefits)	4,444,648	5,202,228	5,855,419
Fees and dues (for expenses)	4,121,563	4,507,420	4,926,460
Interest and rents	3,426,374	3,481,179	3,705,424
Other receipts	599,208	729,274	511,001
Totals, Income	**12,591,793**	**13,920,101**	**14,998,304**
Expenditure[1]			
Paid to members	5,975,390	5,992,478	6,132,886
General expenses	4,209,878	4,581,294	5,006,141
Other disbursements	116,566	129,252	212,568
Totals, Expenditure	**10,301,834**	**10,703,024**	**11,351,595**
Excess of income over expenditure	2,289,959	3,217,077	3,646,709

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[1] Includes business outside Canada

21.—Life Insurance in Canada of Fraternal Benefit Societies reporting to the Federal Department of Insurance, 1951-53—concluded

Item	1951	1952	1953p
	No.	No.	No.
FOREIGN SOCIETIES			
Net certificates effected	9,394	8,959	9,847
Net certificates become claims	1,346	1,791	1,438
	$	$	$
Net premium income	3,223,052	3,286,649	3,405,668
Net amounts of certificates effected	12,876,327	13,019,897	15,638,822
Net amounts in force	128,048,146	131,212,535	138,806,506
Net amounts of certificates become claims	1,481,335	2,137,651	1,597,318
Net benefits paid	2,078,487	2,939,245	2,359,040
Net outstanding claims	307,599	281,471	350,032
Gross Amounts Terminated by—			
Death	1,272,246	1,269,362	1,243,535
Surrender, expiry, lapse, etc	9,842,881	11,219,221	10,709,556
Totals, Terminated	11,115,127	12,488,583	11,953,091
Assets			
Real estate	—	—	—
Loans on real estate	244,676	334,183	306,625
Policy loans	1,712,467	1,832,897	1,967,868
Bonds, debentures and stocks	27,687,896	29,155,658	32,092,867
Cash	1,315,554	1,179,572	1,156,985
Interest and rent due and accrued	247,227	283,545	316,600
Dues from members	216,730	211,983	220,694
Other assets	16,273	13,730	—
Totals, Assets	**31,440,823**	**33,011,568**	**36,061,639**
Liabilities			
Outstanding claims	449,059	468,218	540,898
Reserve under contracts in force	26,618,537	27,620,769	29,021,876
Other liabilities	1,944,487	2,128,858	2,323,338
Totals, Liabilities	**29,012,083**	**30,217,845**	**31,886,112**
Income			
Premiums (for benefits)	4,335,985	4,558,659	4,801,077
Fees and dues (for expenses)	1,147,873	1,205,120	1,325,707
Interest and rents	948,359	1,024,321	1,118,639
Other receipts	424,067	582,872	555,756
Totals, Income	**6,856,284**	**7,370,972**	**7,801,179**
Expenditure			
Paid to members	2,748,024	3,683,146	3,149,743
General expenses	703,486	784,917	837,746
Other expenditure	333,078	463,958	480,281
Totals, Expenditure	**3,784,588**	**4,932,021**	**4,467,770**
Excess of income over expenditure	3,071,696	2,438,951	3,333,409

Subsection 5.—Life Insurance in Force Outside Canada by Registered Canadian Companies

Tables 22 and 23 give summary statistics of insurance in force as at Dec. 31, 1952, in currencies other than Canadian, classified by companies and by the currencies in which business was written. The data given here are in Canadian dollars, mainly at par rates of exchange for the countries concerned, but there are several exceptions where, for purposes of account, certain companies have converted foreign currencies at rates other than par, particularly where the current rate differs substantially from the par rate. Approximately 65 p.c. of all such business in force was written in United States currency and 19 p.c. in sterling. From another standpoint, approximately 28 p.c. was written in currencies of Commonwealth countries outside Canada, and 72 p.c. in currencies of foreign countries.

Canadian life insurance companies, operating under Federal Government registration, at Dec. 31, 1952 had life insurance in force amounting to $6,012,282,592 in countries outside Canada. Insurance in force in currencies other than Canadian amounted to $5,953,568,118 and the difference between these figures is, presumably, the net amount of non-Canadian business transacted in Canadian currency. As against the total non-Canadian business, including annuity business, the Commonwealth and foreign investments of Canadian life insurance companies as at Dec. 31, 1952, amounted to $1,856,498,711. As the business in force in Canada of these companies at Dec. 31, 1952, amounted to $13,085,349,418, the total business on their books, Canadian and non-Canadian, amounted to $19,097,632,010. Thus, over 31 p.c. of the total business in force was outside Canada.

22.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, by Company, 1952.

Company	Insurance Effected			Insurance in Force		
	Commonwealth Currencies	Foreign Currencies	Total	Commonwealth Currencies	Foreign Currencies	Total
	$	$	$	$	$	$
Alliance Nationale....	—	—	—	—	3,622,015	3,622,015
Canada.........	17,145,910	34,757,408	51,903,318	144,775,007	311,712,728	456,487,735
Commercial....	—	—	—	—	35,000	35,000
Confederation..	16,380,759	35,628,256	52,009,015	140,231,753	200,204,006	340,435,759
Continental.....	—	—	—	29,892	111,414	141,306
Crown..........	10,374,382	53,594,738	63,969,120	71,042,318	271,921,453	342,963,771
Dominion......	1,090,239	15,058,777	16,149,016	10,339,325	87,890,949	98,230,274
Dom. of Canada General......	508,370	—	508,370	3,155,962	10,500	3,166,462
T. Eaton.......	—	—	—	12,500	3,333	15,833
Equitable......	—	—	—	—	152,487	152,487
Great-West.....	—	98,898,274	98,898,274	91,231	602,567,461	602,658,692
Imperial........	12,787,167	4,250,371	17,037,538	71,267,963	46,932,458	118,200,421
London.........	—	386,103	386,103	—	6,596,286	6,596,286
Manufacturers..	45,530,824	69,338,397	114,869,221	288,059,257	474,331,918	762,391,175
Maritime.......	169,750	6,500	176,250	2,160,280	40,598	2,200,878
Monarch.......	—	—	—	—	185,152	185,152
Montreal.......	—	14,000	14,000	239,164	383,574	622,738
Mutual.........	—	1,724,952	1,724,952	991,347	16,733,834	17,725,181
National.......	1,197,527	291,114	1,488,641	6,724,498	2,304,488	9,028,986
North American	2,629,596	16,178,259	18,807,855	10,168,507	70,440,813	80,609,320
Northern.......	—	1,740,460	1,740,460	58,850	16,546,702	16,605,552
Sauvegarde.....	—	—	—	—	5,000	5,000
Sun............	102,275,151	211,053,746	313,328,897	944,401,089	2,147,023,070	3,091,424,159
Western......	—	—	—	—	63,936	63,936
Totals.......	**210,089,675**	**542,921,355**	**753,011,030**	**1,693,748,943**	**4,259,819,175**	**5,953,568,118**

22.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, by Company, 1952—concluded.

Company	Liabilities		
	Commonwealth Currencies	Foreign Currencies	Total
	$	$	$
Alliance Nationale	—	1,062,685	1,062,685
Canada	55,571,404	106,948,809	162,520,213
Commercial	—	18,482	18,482
Confederation	48,069,771	43,547,230	91,617,001
Continental	17,436	43,735	61,171
Crown	20,366,907	44,023,277	64,390,184
Dominion	2,287,313	21,447,542	23,734,855
Dominion of Canada General	881,683	1,538	883,221
T. Eaton	7,771	1,147	8,918
Equitable	—	44,315	44,315
Great-West	91,237	152,564,139	152,655,376
Imperial	15,906,084	14,457,668	30,363,752
London	—	497,862	497,862
Manufacturers	90,659,265	157,030,325	247,689,590
Maritime	743,170	13,651	756,821
Monarch	—	450,772	450,772
Montreal	484	135,512	135,996
Mutual	516,465	4,634,004	5,150,469
National	1,246,903	438,429	1,685,332
North American	2,360,682	16,219,282	18,579,964
Northern	20,962	2,226,204	2,247,166
Sauvegarde	—	815	815
Sun	368,804,642	720,790,668	1,089,595,310
Western	—	23,108	23,108
Totals	**607,552,179**	**1,286,621,199**	**1,894,173,378**

23.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, 1952.

Currency	Insurance Effected	Insurance in Force	Liabilities
	$	$	$
Commonwealth Currencies—			
Pounds—			
Sterling	126,502,758	1,137,770,144	446,859,637
Australia	—	31,368	22,288
British West Indies and Bermuda	8,404,255	52,269,561	11,842,506
Cyprus	—	—	380
South Africa	32,008,901	206,501,282	50,340,357
Southern Rhodesia	2,785,990	8,625,412	1,208,509
Dollars—			
British Honduras	19,950	737,349	302,423
British West Indies and Bermuda[1]	12,879,188	78,695,319	24,118,734
Hong Kong	940,757	9,814,970	2,400,780
Malaya, Singapore or Straits	5,928,332	25,776,635	5,073,448
Rupees—			
Ceylon	4,986,627	33,655,598	9,480,252
India	12,184,510	126,236,788	53,294,191
Pakistan	—	2,044,565	1,384,744
Shillings—			
East Africa	3,448,407	11,589,952	1,223,930
Totals, Commonwealth Currencies	**210,089,675**	**1,693,748,943**	**607,552,179**

For footnote, *see* end of table.

23.—Life Insurance Effected and in Force and Liabilities of Canadian Companies (excluding Fraternal Societies) operating under Federal Government Registration, in Currencies other than Canadian, 1952—concluded.

Currency	Insurance Effected	Insurance in Force	Liabilities
	$	$	$
Foreign Currencies—			
Bahts (Thailand)	—	204,796	147,848
Bolivares (Venezuela)	6,928,805	36,430,036	3,929,199
Cordobas (Nicaragua)	—	14,684	9,852
Dollars (United States of America)	492,783,621	3,893,750,979	1,204,650,694
Francs (France)	—	19,929	17,575
Francs (Switzerland)	—	7,280	14,503
Guilders (Netherlands Antilles)	999,825	12,675,791	4,381,399
Kyats (Burma)	—	1,164,358	1,014,472
Pesos (Argentina)	743,130	16,265,062	5,563,920
Pesos (Chile)	—	171,818	113,866
Pesos (Colombia)	5,813,874	17,530,710	2,202,785
Pesos (Cuba)	21,282,480	164,391,089	38,473,592
Pesos (Dominican Republic)	61,500	68,500	40,899
Pesos (Mexico)	1,996,561	9,322,773	1,770,650
Pesos (Philippines)	7,506,928	53,175,234	9,468,305
Pounds (Egypt)	691,356	33,885,127	9,798,095
Pounds (Israel)	4,092,975	13,911,884	1,942,755
Quetzales (Guatemala)	—	—	38,259
Rupiahs (Indonesia[1])	20,300	6,564,583	2,858,829
Soles (Peru)	—	241,128	151,381
Yen (Japan)	—	23,414	32,321
Totals, Foreign Currencies	**542,921,355**	**4,259,819,175**	**1,286,621,199**
Grand Totals	**753,011,030**	**5,953,568,118**	**1,894,173,378**

[1] Includes British Guiana which Crown Life and North American Life Insurance Companies did not separate from British West Indies.

Subsection 6.—Total Registered Life Insurance in Canada and Business of Canadian Organizations Abroad

Table **24** summarizes the business outside Canada of Canadian life companies and fraternal benefit societies. If to these figures is added the business in Canada of these organizations, as shown in Table **12**, p. 1233, total business, internal and external, of all Canadian life insurance companies and fraternal societies may be obtained. Again, adding the business in Canada of British and foreign companies and fraternal societies, a grand total is obtained of all life insurance in Canada and of the life insurance business abroad of Canadian organizations; this total is shown in Table **25**.

24.—Business of Registered Canadian Life Companies and Fraternal Societies Abroad, 1953ᴾ

NOTE.—Figures for business in Canada will be found in Table **12**, p. 1233.

Item	New Policies Effected (net)	Net Insurance in Force Dec. 31	Net Premiums Received	Net Claims Paid
	$	$	$	$
Canadian Life Companies—				
Federal	841,904,741	6,554,085,400	212,743,397	75,287,439
Provincial	[1]	[1]	[1]	[1]
Canadian Fraternal Societies—				
Federal	17,470,848	126,712,795	1,729,413	1,897,130
Provincial	[1]	[1]	[1]	[1]
Totals	**859,375,589**	**6,680,798,195**	**214,472,810**	**77,184,569**

[1] None reported.

25.—Total Registered Life Insurance Business in Canada and of Canadian Organizations Abroad, 1953p

Item	New Policies Effected (net)	Net Insurance in Force Dec. 31	Net Premiums Received	Net Claims Paid
	$	$	$	$
Canadian Life Companies—				
Federal	2,593,525,159	21,080,825,695	515,777,514	166,120,778
Provincial	169,325,061	774,730,284	17,112,165	3,624,784
Canadian Fraternal Societies—				
Federal	49,943,951	315,035,034	4,605,567	4,341,623
Provincial	54,774,386	318,838,349	6,540,885	4,522,055
British life companies	98,437,715	519,137,847	12,310,612	3,365,532
Foreign life companies	704,744,833	6,181,027,477	139,441,603	42,628,927
Foreign fraternal societies	15,638,822	138,806,506	3,405,668	1,665,881
Grand Totals	**3,686,389,927**	**29,328,401,192**	**699,194,014**	**226,269,580**

Section 3.—Casualty Insurance

Casualty insurance in Canada includes various forms of accident and 25 other classes of insurance transacted by companies having Federal Government registration. In 1953, such insurance was issued by 308 companies, of which 76 were Canadian, 82 British and 150 foreign; of these, 216 companies also transacted fire insurance. In addition, 19 fraternal orders or societies conducted accident and sickness insurance as well as life insurance business and three fraternal orders or societies carried on accident or sickness insurance only.

Table 27 shows the division of business in this field between Federal Government registrations and provincial licensees and indicates that, as for fire and life insurance, the bulk of the business (about 90 p.c. in this case) is transacted by companies having Federal Government registration.

Because, as indicated above, most of the companies carrying on casualty insurance in Canada also transact fire insurance, their assets, liabilities, income and expenditure are included in the financial statistics of fire insurance companies given in Section 1, Subsection 3, of this Chapter. Table 28, p. 1248, gives corresponding figures for total casualty business of Canadian companies, and the casualty business in Canada of British and foreign companies, whose transactions are confined to insurance other than fire and life. In 1953, there were 18 Canadian, 7 British and 67 foreign companies whose operations were limited to the same field.

During the war years, automobile insurance showed a favourable experience at a loss ratio of about 45 p.c. This ratio was slightly lower than for the pre-war years, as a result of lessened traffic but, since the end of the War, the trend has been less favourable; in 1953 the ratio stood at about 52 p.c. Hail insurance in 1952 showed a loss ratio of 54 p.c. but in 1953 this had increased to 95 p.c.

Marine insurance, for which a certificate of registration is not required, showed a very large increase in Canada during the war years and substantial profits resulted. The results for 1941 to 1953 were as follows:—

Year	*Premiums*	*Claims Incurred*	*Under-writing Profits*
	$	$	$
1941	6,011,922	2,781,190	1,694,470
1942	14,295,543	7,983,963	3,855,415
1943	10,061,059	4,931,286	3,449,873
1944	6,754,361	2,172,418	3,243,889
1945	5,978,274	2,995,704	1,704,367
1946	5,655,392	2,232,701	2,084,412
1947	7,932,404	4,529,161	1,031,313
1948	7,986,658	3,468,045	2,466,397
1949	7,715,671	4,327,555	1,342,088
1950	7,592,558	3,098,086	2,394,336
1951	8,908,639	4,670,972	1,716,201
1952	9,201,477	5,627,211	1,130,828
1953	9,429,278	5,413,073	1,196,680

26.—Casualty Insurance Transacted in Canada by Companies under Federal Government Registration, 1953

Class of Business	Number of Companies			Years Trans-acted	Aggregate Experience during Period Transacted	
	Cana-dian	Brit-ish	For-eign		Premiums Written	Claims Incurred
				No.	$	$
Accident	—	—	—	50	92,299,497	43,476,664
Accident—						
(*a*) Personal	44	44	34	29	119,223,349	45,734,417
(*b*) Public Liability ('Other' until 1941)	47	47	41	29	109,206,456	42,468,696
(*c*) Employers' Liability (Employers' Liability and Workmen's Compensation until 1941)	40	39	32	29	60,578,417	31,227,888
Combined accident and sickness	22	11	30	40	387,988,693	263,902,339
Aircraft (Aviation until 1941)	3	8	19	26	11,258,313	6,425,904
Automobile	51	64	84	44	1,087,598,594	581,402,227
Boiler—						
(*a*) Boiler (Steam Boiler until 1941)	12	7	6	77	30,225,576	3,374,731
(*b*) Machinery (Electrical Machinery until 1941)	6	6	6	32	12,492,449	3,180,131
Credit	—	—	4	34	8,898,627	2,137,073
Crop	—	—	—	1	12,268	40,091
Earthquake	17	24	34	29	457,828	15,098
Explosion	—	—	—	9	1,195,107	12,189
Explosion (Riot and C.C. until 1941)	16	15	24	21	1,919,319	40,755
Falling aircraft	—	—	2	22	22,175	8,550
Forgery	20	8	13	35	1,697,562	377,130
Fraud	—	—	—	18	315,992	99,688
Guarantee (not separated into Fidelity and Surety prior to 1921)	—	—	—	47	13,452,616	3,811,867
Fidelity (since 1921)	43	29	31	32	43,563,672	12,071,684
Surety (since 1921)	42	28	27	32	36,846,605	5,169,252
Hail	5	3	25	44	115,859,670	71,084,324
Impact by vehicles	—	—	1	5	63	—
Inland transportation	42	60	65	57	53,853,803	21,213,573
Live stock	1	1	2	46	2,908,851	1,759,275
Personal property	47	62	72	24	141,376,255	73,369,692
Plate glass	43	43	32	79	29,384,745	13,442,041
Real property (Property prior to 1941)	17	27	25	17	5,625,676	1,745,885
Sickness	31	25	16	58	113,074,303	62,795,540
Sprinkler leakage	—	—	—	14	844,301	427,673
Sprinkler leakage[1]	9	12	14	30	394,825	116,584
Theft (Burglary prior to 1941)	46	41	39	61	60,211,803	22,299,132
Title (1907-1916)	—	—	—	10	11,252	—
Water damage	—	—	2	5	52,648	13,046
Weather	—	—	2	39	807,539	473,191
Windstorm (Tornado prior to 1941)	23	26	28	46	6,553,316	3,979,624
Totals	...	...	...	...	**2,550,212,165**	**1,317,695,954**

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[1] Sprinkler leakage business of fire companies was grouped with fire business from 1923 to 1940, but has been shown separately from their fire business since 1940 when written under a separate policy.

27.—Casualty Insurance Premiums and Claims in Canada, by Class of Business, 1953

NOTE.—Less all reinsurance for Canadian companies and registered or licensed reinsurance only for British and foreign companies.

Class of Business	Federal Registered Companies	Provincial Licensees			Lloyds	Grand Total
		Within Provinces by which they are Incorporated	In Provinces other than those by which Incorporated	Total Provincial Licensees		
	NET PREMIUMS WRITTEN					
	$	$	$	$	$	$
Accident—						
Personal	7,546,855	504,019	101	504,120	879,485	8,930,460
Public liability	12,997,918	310,123	10,621	320,744	883,328	14,201,990
Employers' liability	3,731,779	46,499	2,602	49,101	327,199	4,108,079
Accident and sickness combined	73,170,589	1,376,457	106,059	1,482,516	47,157	74,700,262
Aircraft	1,436,750	—	—	—	1,306,585	2,743,335
Automobile	161,927,235	7,208,791	551,307	7,760,098	10,726,062	180,413,395
Boiler—(*a*) Boiler	2,588,521	3,970	—	3,970	145,500	2,737,991
(*b*) Machinery	1,472,493				52,032	1,524,525
Credit	410,757	—	—	—	—	410,757
Earthquake	39,850	6	—	6	15,163	55,019
Explosion	19,595	29	—	29	65,744	85,368
Falling aircraft	56	—	—	—	—	56
Forgery	74,439	—	—	—	2,357	76,796
Guarantee fidelity	2,440,658	170,707	5,877	176,584	590,175	3,207,417
Guarantee surety	2,893,972				28,083	2,922,055
Hail	4,343,221	3,334,609	307,500	3,642,109	8,404	7,993,734
Impact by vehicles	10	—	—	—	—	10
Inland transportation	4,608,586	76,199	11,843	88,042	1,451,201	6,147,829
Live stock	73,558	6,029	—	6,029	148,872	228,459
Personal property	19,516,792	79,817	10,017	89,834	385,904	19,992,530
Plate glass	1,569,171	99,703	2,243	101,946	740	1,671,857
Real property	656,618	3,383	—	3,383	159,089	819,090
Sickness	9,574,758	1,153	—	1,153	184,114	9,760,025
Sprinkler leakage	5,482	—	2	2	4,258	9,742
Theft	4,507,392	55,464	4,433	59,897	243,253	4,810,542
Water damage	12,870	—	—	—	—	12,870
Weather	18,787	146,380	—	146,380	775	165,942
Windstorm	269,316	450,441	—	450,441	252	720,009
Totals	**315,908,028**	**13,874,779**	**1,012,605**	**14,886,384**	**17,655,732**	**348,450,144**
	NET CLAIMS INCURRED					
	$	$	$	$	$	$
Accident—						
Personal	2,740,288	151,973	46	152,019	272,051	3,164,358
Public liability	6,530,844	153,875	1,231	155,106	338,660	7,024,610
Employers' liability	1,359,300	6,857	—	6,857	137,025	1,503,182
Accident and sickness combined	54,459,313	1,037,537	22,031	1,059,568	15,262	55,534,143
Aircraft	529,300	—	—	—	1,069,650	1,598,950
Automobile	84,521,976	3,385,619	281,748	3,667,367	5,650,490	93,839,833
Boiler—(*a*) Boiler	377,468	9,640	—	9,640	24,388	411,496
(*b*) Machinery	210,369				−236,718	−26,349
Credit	−8,757	—	—	—	—	−8,757
Earthquake	—	—	—	—	10,701	10,701
Explosion	3,777	—	—	—	1,773	5,550
Forgery	11,532	—	—	—	36,123	47,655
Guarantee fidelity	723,856	38,117	—	38,117	543,110	1,305,083
Guarantee surety	539,552				−9,916	529,636
Hail	4,105,921	2,916,355	143,662	3,060,017	—	7,165,938
Inland transportation	2,291,801	46,482	1,450	47,932	953,591	3,293,324
Live stock	34,918	2,420	—	2,420	83,459	120,797
Personal property	8,764,362	10,201	2,936	13,137	198,528	8,976,027
Plate glass	759,708	44,385	192	44,577	320	804,605
Real property	140,366	5,101	—	5,101	8,587	154,054
Sickness	5,925,980	244	—	244	96,725	6,022,949
Sprinkler leakage	963	—	—	—	—	963
Theft	1,584,042	29,460	5,069	34,529	30,881	1,649,452
Water damage	1,206	—	—	—	—	1,206
Weather	4,946	102,229	—	102,229	—	107,175
Windstorm	316,454	400,099	—	400,099	—	716,553
Totals	**175,929,485**	**8,340,594**	**458,365**	**8,798,959**	**9,224,690**	**193,953,134**

28.—Assets and Liabilities, Income and Expenditure of Canadian, British and Foreign Casualty Insurance Companies, 1952 and 1953

Companies	Assets	Liabilities	Excess of Assets over Liabilities	Income	Expenditure	Excess of Income over Expenditure
	$	$	$	$	$	$
1952						
Canadian (in all countries)	27,064,412	17,680,659	9,383,753	31,234,812	29,236,222	1,998,590
British (in Canada)	1,320.309	726,834	593,475	709,855	505,451	204,404
Foreign (in Canada)	74,138.073	49,933,596	24,204,477	77,516,606	65,964,990	11,551,616
Totals	**102,522,794**	**68,341,089**	**34,181,705**	**109,461,273**	**95,706,663**	**13,754,610**
1953						
Canadian (in all countries)	31,603,832	21,490,134	10,112,698	39,121,975	36,719,113	2,402,862
British (in Canada)	3,120,745	1,752,221	1,368,524	2,713,608	2 213,721	499,887
Foreign (in Canada)	86,847,828	58,131,613	28,716,215	87,906,335	77.160,934	10,745,401
Totals	**121,572,405**	**81,373,968**	**40,197,437**	**129,741,918**	**116,093,768**	**13,648,150**

Section 4.—Government Insurance

In addition to the insurance provided by private insurance companies, various types of government insurance schemes have been adopted in recent years by the Federal and Provincial Governments.

Information on unemployment insurance, health insurance, veterans insurance, export credits insurance, etc., will be found in the appropriate Chapters on Labour, Health and Welfare, Foreign Trade, etc.

Provincial Insurance Schemes.—The Saskatchewan Government Insurance Office, a Crown corporation established by the Saskatchewan Government Insurance Act, 1944, commenced business May 1, 1945; it deals in all lines of insurance other than sickness and life.

It administers the Automobile Accident Insurance Act, which provides compensation for the victims of automobile accidents as well as property damage in auto accidents. The Act provides Saskatchewan residents with personal injury coverage without regard to liability and, in addition, all Saskatchewan motorists enjoy public liability, and comprehensive protection, including fire, theft and collision coverages.

The Office, together with the Saskatchewan Department of Natural Resources, administers a trust fund made up of a portion of hunting licence fees and insurance premiums, to compensate farmers for damage done to their crops by certain forms of wildlife, chiefly ducks, geese and deer.

Information regarding the operation of the Saskatchewan Government Insurance Office or the Automobile Accident Insurance Act may be obtained from:—

Public Relations Department,
The Saskatchewan Government Insurance Office,
11th and Cornwall Streets,
Regina, Saskatchewan.

In the Province of Alberta, life insurance is provided through the Life Insurance Company of Alberta, a Crown company that is not an emanation from the Provincial Government. Similarly, another Crown company, the Alberta General Insurance Company, provides all other kinds of insurance except life, accident and sickness. The Alberta Hail Board provides farmers with insurance for their crops against damage by hail. Additional information may be obtained from:—

The Superintendent of Insurance,
Department of the Provincial Secretary for Alberta,
Edmonton, Alberta.

CHAPTER XXVIII.—DEFENCE OF CANADA

CONSPECTUS

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NOTE.—*The interpretation of the symbols used in the tables throughout the Year Book will be found facing p. 1 of this volume.*

PART I.—THE ARMED SERVICES AND DEFENCE RESEARCH*

Section 1.—The Department of National Defence

The Minister of National Defence exercises control over, and management of, the Canadian Armed Forces, the Defence Research Board and other matters relating to national defence. Under his direction, the Armed Forces are commanded by their respective Chiefs of Staff and the Defence Research Board has its Chairman. A Chairman of the Chiefs of Staff Committee, appointed in 1951, is responsible for the co-ordination of the training and operations of the Canadian Armed Forces.

The civilian administrative organization, headed by the Deputy Minister, is constituted on a functional basis. The Deputy Minister maintains a continuing review and control over the financial aspects of operational policy, logistics and personnel, and administration. The Deputy Minister is assisted by two Associate Deputy Ministers, one of whom is stationed in the United Kingdom handling departmental problems arising out of Canada's NATO commitments in Europe. There are also three Assistant Deputy Ministers directing the financial, supply, and administrative and personnel divisions, respectively, of the Deputy Minister's Office. Directly responsible to the Deputy Minister are the Controller General of Inspection Services, the Chief Secretary, the Judge Advocate General and, where staff matters are concerned, the Director of Public Relations.

A number of committees within the Department meet at regular intervals to consider and advise on joint issues. These include:—

(1) **Defence Council.**—Composed of the Minister of National Defence (Chairman), the Parliamentary Assistant to the Minister, the Deputy Minister, the Chairman, Chiefs of Staff, the three Chiefs of Staff and the Chairman of the Defence Research Board, its purpose is to advise the Minister on administrative matters.

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* Revised under direction of the Deputy Minister, Department of National Defence, Ottawa.

(2) **Chiefs of Staff Committee.**—Composed of the Chairman, Chiefs of Staff, the three Chiefs of Staff of the Services, the Chairman of the Defence Research Board and the Deputy Minister—the Secretary to the Cabinet and the Under Secretary of State for External Affairs attend when required—its purpose is to maintain a continuous review of all operational problems. Sub-committees consider various aspects of these problems and report to the parent committee.

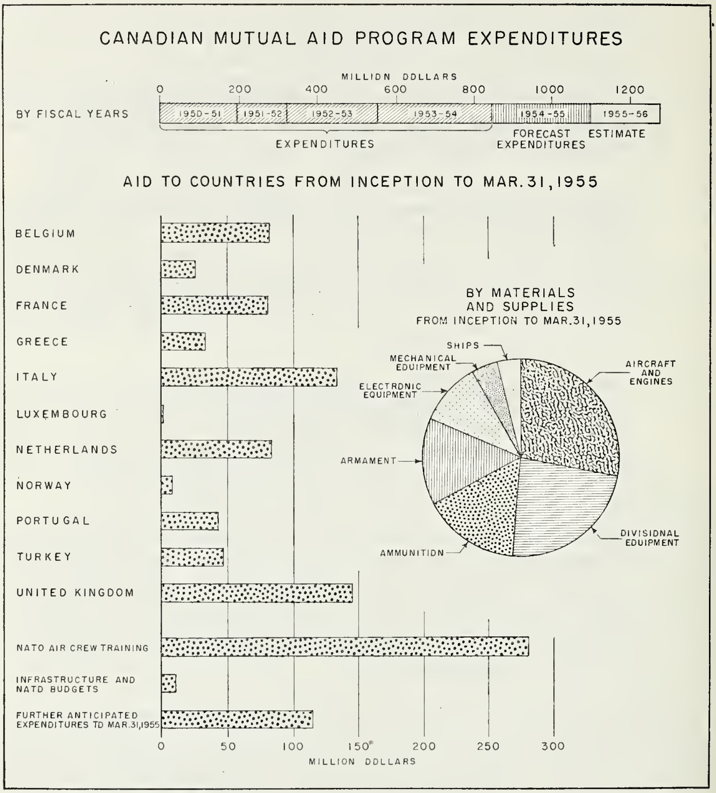
(3) **Personnel Members Committee.**—Composed of the Chief of Naval Personnel, Adjutant-General, Air Member for Personnel, Assistant Deputy Minister (Administration and Personnel), Assistant Deputy Minister (Finance) and a representative of the Chairman of the Defence Research Board, its purpose is to examine personnel problems of the three Services with the general aim of achieving uniform personnel policies. Sub-committees consider various aspects of personnel problems and report to the parent committee.

(4) **Principal Supply Officers Committee.**—Composed of the Chief of Naval Technical Services, the Quartermaster-General, the Air Member for Technical Services, the Assistant Deputy Minister (Requirements) and a representative of the Chairman of the Defence Research Board, its purpose is to consider all logistical problems. Sub-committees consider various aspects of these problems and report to the parent committee.

(5) **Defence Supply Panels.**—Twelve panels, composed of a representative from each of the Services as well as representatives of the Deputy Minister, of Inspection Services and of the Department of Defence Production, maintain a continuous review of procurement problems, and consider various aspects of the procurement of equipment, such as ammunition, armament, aircraft, etc., for the Department of National Defence by the Department of Defence Production.

Liaison Abroad.—The Chairman of the Chiefs of Staff, the Canadian military representative in the North Atlantic Treaty Organization, is responsible for co-ordinating all NATO military matters and acts as a military adviser to Canadian NATO delegations. For purposes of liaison and the furtherance of international co-operation in defence, Canada also maintains (1) Canadian Joint Staff (Washington) representing the three Services and the Defence Research Board; (2) Canadian Joint Staff (London) representing the three Services and the Defence Research Board; (3) Canadian Military Mission, Far East; and (4) Service Attachés in various countries throughout the world. In addition, a number of defence matters of concern to both Canada and the United States are considered by the Permanent Joint Board on Defence which is composed of representatives from the two countries.

Mutual Aid.—As at Mar. 31, 1954, Canada had contributed nearly $850,000,000 to NATO countries under Mutual Aid programs for the supply of arms and other equipment and the training of aircrews. Over $5,000,000 of this amount had been expended, by the same date, on Infrastructure costs (largely towards airfield and pipe-line construction) and contributions to NATO budgets, in addition to over $25,000,000 contributed by Canada under the special Infrastructure vote. Details of Canada's Mutual Aid program expenditures are shown in the chart and further details on Canada's contributions to NATO on p. 132.



CANADIAN MUTUAL AID PROGRAM EXPENDITURES

The Regular Officer Training Plan (ROTP).—The object of the Regular Officer Training Plan is to train selected high-school and university students for regular commissions in a branch of the active forces. Students are enrolled as officer cadets and subsidized at one of the Canadian Services Colleges or at a university for a period not exceeding four years. An additional year is provided for students who take the preparatory year at the Collège Royal Militaire de Saint-Jean. Practical training is given during the summer months.

Total Strength and Rates of Pay and Allowances.—The strengths of the active forces of the three Services have continued to increase to keep pace with defence objectives and commitments. At June 30, 1954, the total active force strength was 113,958 composed of: Navy, 17,251; Army, 49,851; and Air Force, 46,856. The strength of the reserve elements of the three Services was 56,421.

The entire pay structure for comparable ranks in the different Services is on a uniform basis. Monthly rates for pay and allowances are given in Table 1.

1.—Monthly Rates of Pay and Allowances for the Armed Forces, Effective Dec. 1, 1953

Royal Canadian Navy	Canadian Army	Royal Canadian Air Force	Basic Pay	Progressive Pay			Group Pay for Tradesmen and Specialists				Subsistence Allowance		Ration Allowance	Marriage Allowance	Separated Family's Allowance (with Children)	
				Years in Rank			Group				Personnel not in Receipt of Marriage Allowance	Personnel in Receipt of Marriage Allowance			Personnel in Receipt of Subsistence Allowance	Personnel not in Receipt of Subsistence Allowance
				3	6	9	1	2	3	4						
			$								$	$	$	$	$	$
Ordinary Seaman (under 17 years)	Private (under 17 years)	Aircraftman 2 (under 17 years)	46	—	—	—	—	—	—	—	61	—	30	—	—	—
Ordinary Seaman (entry)	Private (entry)	Aircraftman 2	92	—	—	—	10	25	45	60	61	91	30	30	61	91
Ordinary Seaman (trained)	Private (trained)	Aircraftman 1	96	—	—	—	10	25	45	60	61	91	30	30	61	91
Able Seaman	Private	Leading Aircraftman	107	10	—	—	10	25	45	60	61	91	30	30	61	91
Leading Seaman	Corporal	Corporal	127	3	3	—	10	25	45	60	61	91	30	30	61	91
Petty Officer 2	Sergeant	Sergeant	144	5	5	—	10	25	45	60	72	91	30	30	72	91
Petty Officer 1	Staff Sergeant	Flight Sergeant	165	5	5	—	10	25	45	60	81	91	30	30	81	91
Chief Petty Officer 2	Warrant Officer 2	Warrant Officer 2	195	5	5	—	10	25	45	60	81	91	30	30	81	91
Chief Petty Officer 1	Warrant Officer 1	Warrant Officer 1	224	5	5	—	10	25	45	60	92	102	30	30	92	102
Midshipman	—	—	117	—	—	—	—	—	—	—	61	91	30	40	61	91
Acting Sub-Lieutenant	Second Lieutenant	Pilot Officer	185	—	—	—	—	—	—	—	65	91	30	40	65	91
Sub-Lieutenant	Lieutenant	Flight Officer	230	15	15	—	—	—	—	—	89	110	30	40	89	110
Commanding Officer	—	—	288	15	15	—	—	—	—	—	94	110	30	40	94	110
Lieutenant	Captain	Flight Lieutenant	290	25	25	25	—	—	—	—	94	110	30	40	94	110
Lieutenant-Commander	Major	Squadron Leader	370	25	25	—	—	—	—	—	113	113	30	40	113	113
Commander	Lieutenant-Colonel	Wing Commander	460	35	35	—	—	—	—	—	126	126	30	40	126	126
Captain	Colonel	Group Captain	615	35	35	—	—	—	—	—	139	139	30	40	139	139
Commodore	Brigadier	Air Commodore	827	—	—	—	—	—	—	—	153	153	30	40	153	153
Rear-Admiral	Major-General	Air Vice-Marshal	981	—	—	—	—	—	—	—	165	165	30	40	165	165

Subsection 1.—The Royal Canadian Navy

Organization.—The Chief of Naval Staff at Naval Headquarters at Ottawa exercises central authority over the Royal Canadian Navy; Flag Officers at East and West Coasts exercise operational and administrative command of ships and establishments within the Atlantic and Pacific Coast Commands, respectively. There are also 22 Naval Divisions throughout Canada that are established primarily for the recruiting and training of the Royal Canadian Navy (Reserve); they are administered by the Commanding Officer, Naval Divisions with headquarters at Hamilton, Ont. Naval missions are maintained at London and Washington to maintain liaison with the Royal Navy and the United States Navy. As part of Canada's NATO commitment, officers of the Royal Canadian Navy are now serving on the staffs of the Supreme Allied Commander, Atlantic, and the Commander-in-Chief, Eastern and Western Atlantic Areas.

For the protection of shipping and the defence of Canadian coastal areas and harbours, the Royal Canadian Navy had 58 ships in commission during the fiscal year ended Mar. 31, 1954. In the event of war, 36 of these are available for assignment to NATO for the defence of the Canada-United States area and for the protection of convoys under the control of the Supreme Allied Commander, Atlantic. Ships not earmarked for assignment to NATO are required for harbour defence, for training and for miscellaneous duties.

The strength of the Royal Canadian Navy on June 30, 1954, was 2,391 officers and 14,860 men in the regular force and 1,455 officers and 3,610 men and women in the reserve force.

Operations at Sea 1953-54.—During the year ended Mar. 31, 1954, the Royal Canadian Navy continued to maintain three destroyers in Korean waters.

The Canadian Coronation Squadron, HMC Ships *Magnificent, Quebec, Ontario, Sioux, La Hulloise* and *Swansea* participated in the Coronation Review at Spithead. En route to the Coronation, the squadron took part in Exercise "Grand Banks", an RCN–RCAF Maritime Training exercise held during May 1953. The *Magnificent, Algonquin, La Hulloise* and *Swansea* also participated in Exercise "Mariner", a large-scale NATO exercise held in September 1953. The First Canadian Escort Squadron, formed in November 1953, in the Atlantic Command, consisting of HMC Ships *Algonquin, Lauzon, Prestonian* and *Toronto,* participated in NATO Exercise "New Broom" in conjunction with the United States Navy and RCAF in February 1954. The First Canadian Minesweeping Squadron was formed in September 1953 in the Atlantic Command and a second minesweeping squadron is planned for the Pacific Coast. HMCS *Ontario* departed in February on a three-month goodwill and training cruise to Australia, New Zealand, Tongatabu, Suva and Pearl Harbour. The cruise was arranged so that the ship's visit to Hobart, Tasmania, would coincide with the arrival there of Her Majesty, Queen Elizabeth, and the 150th anniversary of the founding of Hobart. In addition to participation in the Coronation and in joint exercises with other Canadian and NATO forces, personnel and ships of the RCN undertook cruises to various Canadian and American ports. During the year United States Navy and Royal Navy submarines and ships of the RCN carried out combined anti-submarine exercises on both East and West coasts.

Training Ashore.—HMCS *Stadacona* at Halifax, N.S., and HMCS *Naden* at Esquimalt, B.C., are the major shore establishments of the Royal Canadian Navy. Their facilities include schools for general and specialized training besides the drafting depots, hospitals and accommodation facilities necessary for the maintenance of the ships based on each coast. Formal courses in seamanship, gunnery, navigation direction, communications, diving, damage control and fire-fighting, electricity and electronics, marine engineering, meteorology, medical assistant skills, and supply duties are provided in the schools and centres of these two establishments for officers and men of the regular and reserve forces.

A third major shore establishment is HMCS *Shearwater* at Dartmouth, N.S., which provides technical training for naval aviation.

During the fiscal year ended Mar. 31, 1954, 3,303 regular force new entries and re-entries received training in the new entry training establishment, HMCS *Cornwallis.* The method of training new entry ordinary seamen has been revised to afford an economy of training time and inter-ship and establishments training.

In order to standardize the professional knowledge of all lieutenants of the executive branch, 11-month technical and leadership courses for junior officers have been conducted since 1949. To assist in overcoming the shortage of skilled tradesmen, the Royal Canadian Navy commenced a Technical Apprenticeship Training program in August 1952 in HMCS *Cape Breton,* a 10,000-ton maintenance vessel, equipped and commissioned especially for this purpose.

As part of the naval aviation training program, short service appointment midshipmen specializing in naval aviation undergo a 12-month basic course before commencing flying training. The first six months are spent in HMCS *Cornwallis* and the second term is spent aboard a cruiser. Training of pilots, observers, air engineering and maintenance personnel, observers' mates and others connected with naval aviation is carried out at HMCS *Shearwater* with further training aboard HMCS *Magnificent.* HMCS *Stadacona* also provides additional instruction in some technical subjects. As part of the naval aviation program, exercises are carried out in conjunction with the Royal Navy, the RCAF and the United States Navy.

Junior officers of the engineering and executive branches on completion of their initial training in Canada proceed to the United Kingdom to take sub-lieutenants courses in gunnery, torpedo, anti-submarine, navigation direction, and ship construction. Advanced training in certain highly technical fields and in staff duties is undertaken by selected officers in Canada, the United Kingdom, and the United States.

At HMCS *D'Iberville,* where both the French and English languages are used, the program is designed to give all French-speaking regular force new entries a basic knowledge of English together with preliminary training in seamanship and professional naval subjects. Following these courses, French-speaking new entries join with classes in HMCS *Cornwallis* at an appropriate stage in their training.

Ship Construction, Refitting, and Modernization.—The program for 14 new destroyer escorts, the most complex and challenging of its kind ever undertaken by Canada, progressed at a slower rate than had been anticipated. Compared to similar construction projects in British and American shipyards, Canadian production has not, however, been unsatisfactory, and the skills and experience being gained are expected to be of great future value. By Mar. 31, 1954, five of the destroyer escorts had been launched and the balance of the launchings scheduled in the following fiscal year. HMCS *Labrador,* an Arctic patrol vessel launched in December 1951, completed trials and was commissioned on July 8, 1954. Thirteen of the 14 coastal minesweepers being built in Canada had been launched by Mar. 31, 1954, and six of these had been completed; six additional coastal minesweepers will be built to replace new minesweepers allocated as part of Canada's Mutual Aid contribution to her NATO allies. The refitting, conversion and modernization program for destroyers, frigates and minesweepers was well under way. HMCS *Bonaventure,* a replacement aircraft carrier for HMCS *Magnificent,* was being completed at Belfast, Northern Ireland.

Royal Canadian Navy (Reserve).—Naval Divisions are established in the following centres:—

St. John's, N'f'ld., HMCS *Cabot*
Cornerbrook, N'f'ld., HMCS *Caribou*
Charlottetown, P.E.I., HMCS *Queen Charlotte*
Halifax, N.S., HMCS *Scotian*
Saint John, N.B., HMCS *Brunswicker*
Quebec, Que., HMCS *Montcalm*
Montreal, Que., HMCS *Donnacona*
Ottawa, Ont., HMCS *Carleton*
Toronto, Ont., HMCS *York*
Kingston, Ont., HMCS *Cataraqui*
Hamilton, Ont., HMCS *Star*
Windsor, Ont., HMCS *Hunter*
London, Ont., HMCS *Prevost*
Port Arthur, Ont., HMCS *Griffin*
Winnipeg, Man., HMCS *Chippawa*
Regina, Sask., HMCS *Queen*
Saskatoon, Sask., HMCS *Unicorn*
Calgary, Alta., HMCS *Tecumseh*
Edmonton, Alta., HMCS *Nonsuch*
Vancouver, B.C., HMCS *Discovery*
Victoria, B.C., HMCS *Malahat*
Prince Rupert, B.C., HMCS *Chatham*

Each division, commanded by a reserve officer, is responsible for specialized training in one of the various phases of naval activity: gunnery, harbour defence, aviation, communications, etc. Royal Canadian Navy officers and men assist with instruction.

Since the spring of 1953, the 22 Naval Divisions have been grouped in a Reserve Command, headed by the Commanding Officer, Naval Divisions, at Hamilton, Ont. The Great Lakes Training Centre handled new entry reserve training in 1953; two gate vessels operated from Hamilton during this period. Great training value was also derived from the Fairmile motor launches attached to the Great Lakes divisions and from three small minesweepers operated by coastal divisions.

During 1953-54, Naval Air reserve squadrons were formed at Toronto and Kingston, Ont. and at Victoria, B.C.

University Naval Training Divisions (UNTD).—The university naval training program is designed to give instruction to students in attendance at universities across Canada with the object of providing well-trained junior officers for the Royal Canadian Navy and the Royal Canadian Navy (Reserve). Twenty-three UNTD's, drawing on students in 37 universities and colleges, have been established, with a total strength of 993 cadets at June 30, 1954. The total training period is three years. Cadets are required to complete three winter training periods, two summer periods and certain specified courses. During the year, 11 UNTD cadets were appointed to regular force commissions in the RCN and 192 obtained commissions in the RCN (Reserve).

The Royal Canadian Sea Cadets.—Sea Cadets organization, as of June 30, 1954, consisted of 115 authorized corps sponsored by the Navy League of Canada and administered, trained and supervised by the Royal Canadian Navy. During the spring of 1953, six senior cadets trained in HMCS *Ontario* for four months during that ship's Australian cruise. Twelve sea cadets and one officer embarked in HMCS *Magnificent* for the Coronation and Spithead Review and while in the United Kingdom were guests of the U.K. Navy League. Six sea cadets were also embarked in HMCS *Micmac* for her spring cruises to Bermuda, and to Great Britain for the RNVR Jubilee. Approximately 136 officers and 3,039 sea cadets received training in RCN establishments and Royal Canadian Sea Cadet camps during the summer of 1953. In addition, some 236 cadets undertook seven weeks trades training. A total of 425 sea cadets joined the RCN in 1953.

Subsection 2.—The Canadian Army

Organization.—Army Headquarters at Ottawa, organized as the General Staff Branch, the Adjutant-General Branch and the Quartermaster-General Branch, conducts the planning and policy for the administration and training of the regular and reserve forces of the Canadian Army. Public relations, cadet services, military intelligence, chaplain services, provost and associated activities are directed through Commands by Army Headquarters.

The five Commands and seven areas are located as follows:—

Commands	*Headquarters*	*Areas and Headquarters*
Eastern Command	Halifax, N.S.	(1) New Brunswick Area, Fredericton, N.B.
		(2) Newfoundland Area, St. John's, N'f'ld.
Quebec Command	Montreal, Que.	(3) Eastern Quebec Area, Quebec, Que.
Central Command	Oakville, Ont.	(4) Eastern Ontario Area, Kingston, Ont.
		(5) Western Ontario Area, London, Ont.
Prairie Command	Winnipeg, Man.	(6) Saskatchewan Area, Regina, Sask.
Western Command	Edmonton, Alta.	(7) British Columbia Area, Vancouver, B.C.

The two main components of the Canadian Army are the Canadian Army (Regular)* and the reserves. The components of the reserves are the Canadian Army (Militia)*, the regular reserve, the supplementary reserve, the Canadian Officers' Training Corps (COTC), the cadet services and the reserve militia. Additional to, but not an integral part of, the Canadian Army are the Services Colleges (*see* pp. 1266-1267), officially authorized cadet corps, rifle associations and clubs.

At the end of June 1954, there were 5,369 officers in the Canadian Army (Regular) and 44,482 men; the strength of the Canadian Army (Militia) was 7,514 officers and 38,612 men.

During the latter part of 1953, the 1st Canadian Infantry Division was formed and with the exception of a few units not required under present conditions, the Division has been activated. The divisional headquarters and two-thirds of the Division are stationed and trained in Canada. The remaining third, the 1st Canadian Infantry Brigade, proceeded to Germany in the autumn of 1953 and relieved the 27th Canadian Infantry Brigade. Canadian units in the Base Area and Communications Zone in Europe are administered by Headquarters, Canadian Base Units, Europe, located at Stockum, Germany.

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* Following the announcement by the Minister of National Defence on June 21, 1954, concerning the reorganization of the reserves, the Canadian Army Active Force and Reserve Force became known as the Canadian Army (Regular) and the Canadian Army (Militia), respectively.

A major change in the Royal Canadian Infantry Corps took place at the same time with the formation of a Regiment of Canadian Guards, consisting of four battalions. Two Guards battalions were formed by renaming two heterogeneous infantry battalions originally raised for service in Europe. The other two Guards battalions replaced the third battalions of the Royal Canadian Regiment and the Princess Patricia's Light Infantry. Other changes in the infantry corps included renaming the two Canadian Rifle Battalions as the 1st and 2nd Battalions The Queen's Own Rifles of Canada, and the two Canadian Highland Battalions as the 1st and 2nd Battalions The Black Watch (Royal Highland Regiment) of Canada. The Militia battalions of the Queen's Own Rifles of Canada and The Black Watch (Royal Highland Regiment) of Canada were made the 3rd Battalions of the respective regiments. In the Artillery Corps, the 79th and 81st Field Regiment, Royal Canadian Artillery were made the 3rd and 4th Regiments, Royal Canadian Horse Artillery, and other changes involved changing the identifying numbers of some formations and units to conform to the order of battle of the 1st Canadian Infantry Division.

Operations, 1953-54.—In Korea, the 3rd Battalion, the Royal Canadian Regiment, was engaged on the night of May 2-3, 1953, in sharp combat with enemy units attempting to overrun its position. Following the truce agreement in July 1953, the 25th Canadian Infantry Brigade remained in Korea as part of the 1st Commonwealth Division participating in guard duties and training. The second rotation program had been largely completed before the truce was signed. On Apr. 21, 1953, Brig. J. V. Allard succeeded Brig. M. P. Bogert as commander of the Brigade.

In connection with Canada's military obligations under the North Atlantic Treaty, the 27th Canadian Infantry Brigade Group continued to serve in Germany until November 1953, when it was replaced by the 1st Canadian Infantry Brigade Group. The 1st Brigade moved into four new camps recently constructed in the Soest area of Western Germany. Canadian troops continued to participate in training Exercises with other NATO forces.

As an important part of the defence of Canada the Mobile Striking Force, consisting of infantry and supporting units and an RCAF component, continued preparations to deal effectively with possible small airborne invasions by an aggressor. The battalions forming the infantry element, the 1st Battalions of the Royal Canadian Regiment, the Princess Patricia's Canadian Light Infantry and the Royal 22nd Regiment, have all had valuable battle experience in Korea. Two major exercises were carried out by units of the Mobile Striking Force during the summer and winter. During January and February Exercise "Hot Dog II", in the western sub-Arctic, provided experience in Arctic winter movement and tactics for troops on a battalion scale. In February, Exercise "Loup Garou", conducted in the eastern sub-Arctic, exercised troops on a battalion group scale and included training in airborne skills and close Army-RCAF co-operation. Before this exercise, the army troops participating underwent a period of northern indoctrination training and a preparatory Exercise called "Prairie Beaver I" in the Fort Churchill area.

Training.—Actual training of regular and militia personnel is under the General Officers Commanding Commands as directed by the appropriate branch of Army Headquarters.

The corps training of officers and men and the basic training of 10,129 recruits was carried out at units and at various corps schools during the 1953-54 fiscal year. New training standards for individual training from recruit to junior NCO rank were instituted during this period. During the year, 9,604 personnel attended courses at various schools of instruction. Initial instruction in current affairs, consisting of 12 lectures, was given to recruits during their depot and recruit training. This instruction is continued for officers and men of the Canadian Army (Regular) on the basis of one lecture each week. Examinations were held to select regular officers to attend the Canadian Army Staff College and the Royal Military College of Science and to qualify militia officers for command and staff appointments. Airborne Arctic training continued for all Mobile Striking Force units. Junior NCO courses were conducted under command and formation arrangements and senior NCO courses were conducted at corps schools. French-language instruction was given at Army Headquarters, in all commands and at the Canadian Army Training School for English-speaking officers and NCO's. Fifteen members of the armed forces of other North Atlantic Treaty countries attended courses conducted at Canadian Army schools of instruction.

Trades and specialist training was given at corps schools or units. When feasible, the facilities of civilian schools are used to supplement training at Army establishments. Trades training is conducted in accordance with the training standards for the appropriate trades. During the past year, several new trades and specialties were authorized and individual units are now training more tradesmen and specialists, thereby lightening the training load at corps schools while increasing the total training capacity. To recognize skills and proficiency required in the fighting arms, new specialties have been recommended so that a soldier in the fighting arms will have the opportunity of progressing to higher group pay.

In order to develop and maintain a high standard of physical fitness in the Canadian Army (Regular) a Physical Training Cadre was authorized and the development of the Cadre is to be carried out by stages over the next few years.

The Apprentice Training program, instituted in January 1953, and designed to train soldier apprentices as tradesmen and to provide basic military and academic qualification for advancement during their service, continued throughout the period under review. During 1953, a total of 470 apprentices were enrolled. To provide academic instruction for soldier apprentices, 24 civilian teachers were employed under arrangements with the Department of Labour. Examinations provided by the Department of Veterans Affairs will enable the students to obtain educational credits recognized in all provinces. Apprentices are being trained as clerks, carpenters, electricians, wireless operators, bandsmen, line mechanics, radio mechanics, cooks, medical assistants, storemen, telecommunication mechanics, gun mechanics, vehicle mechanics and armourers. Apprentices' sleeping and ablution accommodation is separate from that used by other troops.

Equipment.—The Canadian Army equipment development program continues to concentrate on those fields particularly suited to Canadian capabilities and in which there are special Canadian needs.

Particular attention has been given to the problem of living and operating in the north under the most severe and adverse conditions. The development and evaluation of defence equipment for atomic, biological and chemical warfare continued in close co-operation with the RCN, RCAF and Defence Scientific Service. The standardization program in the United States, United Kingdom, Canada and within NATO continues to promote an exchange of knowledge to the mutual advantage of the armies concerned. Additional agreements were reached affecting procedures and equipment. Agreement between Belgium, Canada, France, the United Kingdom and the United States to adopt the 7.62-mm (·30-inch) calibre small arms round was reached in the late autumn of 1953. Subsequently, the Canadian Army sponsored a meeting at Ottawa to settle the technical details involved in producing this ammunition in various countries.

The Reserves.—An additional component of the reserves, known as the Canadian Army Regular Reserve, was authorized in December 1953. The purpose of the regular reserve is to provide a means for rapidly expanding the regular army in an emergency. The regular reserve is open to soldiers with good records who have recently served with the regular army. They are required to train, normally with their former units, for not more than 21 days each year and are subject to recall to full-time service in the event of an emergency.

During 1953-54, training in the reserves was conducted at unit headquarters and summer camps with the emphasis placed on producing within each unit a nucleus of instructional and administrative personnel capable of training and organizing the unit in peace and conducting its expansion in the event of mobilization. A training period not exceeding 60 days was authorized for all ranks of the Canadian Army (Militia) with an additional 15 days training at annual camps. Training at summer camps was given a total of 3,754 officers and 10,814 other ranks.

The Canadian Officers' Training Corps (COTC).—Units of the Canadian Officers' Training Corps are maintained at Canadian universities to produce, from among university undergraduates, officers for both the regular and reserve components of the Army. During the past year, 22 officers who had trained with the COTC were granted commissions in the Canadian Army (Regular). Training consists of military studies, drill and physical training during the academic year; the summer term is devoted to practical training at military establishments.

Army Cadet Services.—The number of Royal Canadian Army Cadets was increased during 1953-54 to 64,200, enrolled in 527 corps. Their training was conducted by 2,200 cadet instructors assisted by personnel from the Canadian Army (Regular). During the summer of 1953, a total of 4,557 cadets received trade training at six cadet camps situated at Aldershot, N.S., Valcartier, Que., Ipperwash, Ont., Camp Borden, Ont., Dundurn, Sask., and Vernon, B.C. Cadets qualified in such military trades as driver mechanics, radio-telephone operators, wireless and line operators and basic training instructors. The National Cadet Camp was held during the last two weeks of July and the first week of August 1953, at Banff, Alta. This camp was attended by 156 carefully chosen first class and master cadets. The opportunity to attend this camp was an award for outstanding proficiency in cadet work. During the summer of 1953, courses were held at the summer camps for officers of the Cadet Services of Canada and personnel of the civilian instructional cadre of the Royal Canadian Army Cadets.

Subsection 3.—The Royal Canadian Air Force

Organization.—Air Force Headquarters at Ottawa conducts the planning and policy for administration and training of the active and reserve forces of the Royal Canadian Air Force. The organization of the RCAF is divided into three categories—personnel, logistics, and plans and operations. This functional division is reflected in the Air Force Headquarters organization.

During the fiscal year ended Mar. 31, 1954, the RCAF completed its share of Canada's contribution to the integrated forces of Supreme Headquarters Allied Powers Europe (SHAPE) with the arrival overseas in August 1953 of No. 4 Wing of the 1st Air Division with permanent headquarters at Metz, France.

The major formations of the RCAF remained unchanged, with location of headquarters, as follows:—

Formation	*Headquarters*
Air Defence Command	St. Hubert, Que.
12 Air Defence Group	Vancouver, B.C.
1 Air Division	Metz, France
Air Transport Command	Lachine, Que.
Air Materiel Command	Ottawa, Ont.
Maritime Air Command	Halifax, N.S.
1 Tactical Air Command	Edmonton, Alta.
Training Command	Trenton, Ont.
14 Training Group	Winnipeg, Man.

Canada's home defences were augmented during 1953-54 by the creation of all-weather jet interceptor squadrons equipped with CF-100's, the opening of new bases, the expansion of the Ground Observer Corps and the near completion of the Pinetree radar chain. In June 1954, as a result of the decreased requirement for air transport support to and from Korea, the RCAF airlift was terminated.

At the end of June 1953, the strength of the RCAF regular force was 8,349 officers and 38,507 men; the strength of the auxiliary was 1,805 officers and 3,425 men.

Operations, 1953-54—*Air Defence.*—Air Defence Command continued its planned build-up. The permanent radar system neared completion. Regular force and auxiliary radar units, along with regular fighter, auxiliary fighter and Ground Observer Corps units, participated in the second joint United States-Canada air defence exercise held during July 1953, to test the continental defence system. Improvements were made at all major airfields, and additional navigation aids were installed and all-weather instrument procedures developed for air defence operations.

NATO.—The 1st Air Division reached its maximum strength with the arrival in Europe of the 3rd and 4th Fighter Wings thus fulfilling Canada's commitment to the NATO integrated fighter force. No. 3 Wing, consisting of three squadrons, arrived in Zweibrucken, Germany, in April 1953, while No. 4 Wing, with three squadrons, followed in August and was based at Baden-Soellingen, Germany. Replacement of Sabre II aircraft with the more powerful Orenda-powered Sabre V was commenced.

Maritime Operations.—The Joint Maritime Warfare School at HMCS *Stadacona,* Halifax, N.S. continued to train crews in basic and advanced anti-submarine tactics. Maritime Air Command aircrews took part in joint exercises with the RCN on both coasts and participated in a number of NATO exercises in Atlantic and European exercises.

Air Transport Operations.—The squadrons of Air Transport Command continued to provide air support to the Air Division in Europe and, until June 1954, to the Far East; long-range air support operations were performed by North Star aircraft. The Fairchild C-119 aircraft of the Command were used as cargo and personnel carriers in Canada, as well as for paratroop training. Both types of aircraft were used for supply operations to Arctic weather stations.

Other.—RCAF photographic squadron, No. 408 Squadron, completed camera coverage of additional areas under the air photography and survey program. Large portions of territory north of the Arctic circle were photographed and their geographical locations determined and the height of ground contours calculated.

Two new weather forecast stations were opened by the RCAF, one in Moose Jaw, Sask., and the other in Baden-Soellingen, Germany, bringing to 27 the number of forecast offices that provide meteorological services in Canada and overseas.

Training and Equipment.—During the fiscal year ended Mar. 31, 1954, the RCAF graduated a total of 1,590 RCAF and NATO pilots, navigators and radio officers. In the summer of 1953, 185 pilots, 74 navigators and 5 radio officers from the Canadian Services Colleges and universities underwent aircrew training. Basic trades training courses for non-flying list officers produced 116 graduates. Basic trade schools graduated 6,219 regular force airmen during the period under review.

Officers and flight cadets entering the Service received officer development training at the Officers School, London, Ont. Airmen received initial service training at No. 2 Manning Depot, St. Johns, Que. Basic flying training was conducted at four flying training schools, two of which are located at Centralia, Ont., and Claresholm, Alta.; during the summer of 1953 the flying training schools at Gimli, Man., and Calgary, Alta., were moved to Moose Jaw, Sask., and Penhold, Alta., respectively. Advanced flying training on twin-engine aircraft was given at Saskatoon, Sask. Advanced flying training on single-engine aircraft was given at Portage la Prairie, Man., until the autumn of 1953, when the station began to give advanced flying training on jet aircraft. Another advanced flying school for jet aircraft was opened at Gimli during the past year. The Pilot Weapons School at MacDonald, Man., continued to operate and training on jet aircraft was begun in February 1954. Flying instructor courses were given at the Flying Instructors School at Trenton, Ont.; instrument rating courses were conducted at Centralia and North Bay, Ont., and at Saskatoon, Sask., and pilot attack instructor courses were given at MacDonald, Man. Basic navigation training was conducted at Winnipeg, Man., and at Summerside, P.E.I. Central Navigation School continued to operate at Summerside and conducted instructor and advanced courses. Potential radio officers were trained at the Air Radio Officers School at Clinton, Ont., where advanced courses were also conducted for staff radio officers and instructors.

Formal trade courses for newly commissioned non-flying list officers were conducted at RCAF schools in aeronautical engineering, armament supply, telecommunications and security. Basic courses for unit defence officers were conducted at Camp Borden, Ont. Courses were provided to qualify officers in flying control.

The Department of Labour continued to assist in the basic trades training program. Over 50 civilian instructors were provided by the Department of Labour to assist with language and technical training at RCAF Training Command Schools, as well as a lesser number for instructional duties in the RCAF auxiliary. CF-100, Sabre, Silver Star, and C-119 mobile ground training units were used with great success during the year. Trade advancement training program continued at all units, both regular and auxiliary. To help tradesmen advance more rapidly into the qualified trade group levels, quarterly written trade test boards were continued. Language training programs were conducted where necessary.

Equipment.—Aircraft procurement programs have progressed satisfactorily during the fiscal year ended Mar. 31, 1954. A. V. Roe (Canada) Limited completed delivery of the Canuck CF-100 Mark 3 aircraft and delivery has started of the Mark 4 version. Canadair Limited of Cartierville, near Montreal, Que., made deliveries of the Sabre V (F-86) aircraft with the Orenda 10 engine, according to schedule and continued production according to schedule of the Silver Star (T-33) Jet Trainer. The two DeHavilland Comet jet aircraft delivered to the RCAF are undergoing modification, as recommended by the manufacturer. Arrangements were made to obtain a number of Lockheed Neptune (P-2V7) maritime reconnaissance medium-range aircraft, and steps were also taken to produce, in Canada, the Britannia maritime reconnaissance long-range aircraft to be used by Maritime Reconnaissance Squadrons in lieu of Lancasters. Otter aircraft, produced by DeHavilland in Canada, continued to replace the Norseman for use in search and rescue and for transporting personnel and supplies to destinations not easily accessible to larger transport aircraft. Arrangements were made to procure a small number of T-34 Mentor aircraft for use as elementary pilot trainers.

The program to replace worn out wartime equipment continued during the year and 1,348 new vehicles were procured. Two permanent garages were completed at Trenton and North Bay, Ont., and modifications to other garages improved accommodation. Special types of clothing and equipment, such as flying suits, anti-gravity suits and emergency kits, were procured from Canadian, United States and United Kingdom sources to meet the rapidly changing requirements of aircrews flying high-speed, high-altitude aircraft.

RCAF Reserve.—The sub-components of the RCAF reserves are designated as follows: (1) the Auxiliary; (2) the Primary Reserve; and (3) the Supplementary Reserve.

During the fiscal year ended Mar. 31, 1954, officer development courses were conducted at the Reserve Officers School, Royal Military College, Kingston, Ont., for university flight cadets of the primary reserve participating in their first summer training program. Pilot trainees of the Auxiliary, members of reserve university squadrons and Services Colleges flight cadets received flying training during the year. Potential radio officers from the reserve Air Force, reserve university squadrons and Canadian Services Colleges flight cadets were trained at the Air Radio Officers School at Clinton, Ont.

At the Reserve Officers School at Kingston, initial training for the non-flying list primary reserve flight cadets of Canadian Services Colleges and universities, who were participating in their first summer program, was followed by basic courses in aeronautical engineering, supply, telecommunications, armament and flying control as applicable. Second year cadets were commissioned after successfully completing the final phases of their basic courses. Language and technical training at RCAF Training Command Schools was also given for instruction duties in the RCAF Auxiliary. The reserve tradesman basic training plan, instituted in 1952, was continued and approximately 1,400 recruits, both high school students and air cadets, completed training during 1953-54.

Reserve tradesmen are entitled to take regular force training courses but few are able to do so because of their civilian occupations.

Royal Canadian Air Cadets.—The Royal Canadian Air Cadets are closely associated with the RCAF. Under the sponsorship of the Air Cadet League of Canada, the air cadet movement continued to expand. At the end of the fiscal year Mar. 31, 1954, air cadet strength stood at over 18,000 in 260 squadrons. During the summer of 1953, camps for air cadets were held at RCAF Stations at Greenwood, N.S., Aylmer, Ont., and Abbotsford, B.C. Total attendance at the camps was 3,907 cadets and 448 officers and instructors. The first Air Cadet Senior Leaders Course conducted by the RCAF was held at Camp Borden during July and August. One hundred carefully selected cadets attended the seven-week course and received $100 training bonuses upon graduation. A precision drill team of 40 cadets selected from the Senior Leaders course to represent Canada in the International Drill competition, held at the Canadian National Exhibition at Toronto, won the competition and the Beau International Challenge Trophy for Canada for the fourth time.

The international exchange visits program, sponsored jointly by the RCAF and the Air Cadet League, was again very successful in 1953. Twenty-five cadets were exchanged with the United Kingdom, 25 with the United States, and two each with Denmark, The Netherlands, Norway and Sweden.

Of the 250 senior air cadets who received flying training scholarships awarded by the RCAF, 235 completed the course and were awarded private pilot's licenses and air cadet flying badges. Under the Reserve Tradesmen Training Plan, 387 air cadets received trades training in the nine-week summer courses in addition to their preparatory training at their respective squadrons, during the school year. During 1953, in addition to those who joined the reserve force, 711 air cadets enlisted in the regular force.

Subsection 4.—The Defence Research Board

The Defence Research Board was established on Apr. 1, 1947, by an amendment to the National Defence Act.

The Board consists of a full-time chairman and vice-chairman, six ex-officio members and seven other appointed members. The ex-officio members are the Chiefs of Staff of the three Armed Services, the Deputy Minister of National Defence, the President of the National Research Council, and a representative of the Department of Defence Production. The remaining members, appointed by the Governor in Council for three-year terms, are selected from universities and industry because of their scientific and technical backgrounds.

The organization consists of Headquarters staff, twelve field research stations and liaison officers at London, England, and Washington, U.S.A., and is known collectively as the Defence Scientific Service. Advisory committees composed of leading Canadian scientists provide invaluable assistance to the Defence Scientific Service by their consideration of a variety of problems.

In planning this organization, the Government considered the vital need for continuity in research and planned the Defence Research Board as a fully integrated and permanent part of the defences of the country. To assist co-ordination at the highest level, the Chairman of the Board has the status of a Chief of Staff and is a member of the Chiefs of Staff Committee and of the Defence Council. Thus, the Defence Research Board has been described as a fourth service. Its fundamental purpose is to correlate the special scientific requirements of the Armed Forces with the general research activities of the scientific community at large.

The Board's policy is to select and concentrate its efforts upon defence problems of particular importance to Canada or for which Canada has unique resources or facilities. Existing research facilities such as the National Research Council, are used, wherever possible, to meet the needs of the Armed Forces. The Board has built up new facilities only in those fields which have little or no civilian interest.

From the policy of specialization it follows that close collaboration must be maintained with Canada's larger partners. Specialization is made possible only through the willingness of the United Kingdom and the United States to exchange the results of their broader programs for the less numerous but, nonetheless, valuable benefits of Canadian research.

During the past year, the Defence Research Board conducted research activities in naval, armament, telecommunications, arctic, medical, operational, materials, aeronautical and special weapons problems. Research on naval problems is carried out at the Naval Research Establishment, Dartmouth, N.S., and at the Pacific Naval Laboratory, Esquimalt, B.C. Both stations are engaged in the study of anti-submarine devices, since anti-submarine warfare will be the prime task of the RCN in time of war. Research and development of weapons for the Armed Services is carried out at the Canadian Armament Research and Development Establishment at Valcartier, Que. This is the largest establishment operated by the Board and has facilities for the study of all phases of armament development. The Board operates two laboratories whose prime interest is in the field of electronics. The Radio Physics Laboratory at Shirley's Bay, Ont., is interested mainly in fundamental research associated with radio communications, particularly in northern latitudes. The Electronics Laboratory, situated within the grounds of the National Research Council's Montreal Road Laboratories, is concerned primarily with the development of electronic devices as aids to navigation. The centre for research into arctic and sub-arctic conditions is the Defence Research Northern Laboratory at Fort Churchill, Man., which is mainly occupied with the application of the results of fundamental research into the effect of cold weather on men and materials.

Medical research is conducted in Canadian universities and medical schools, as practicable, and at the Defence Research Medical Laboratories at Downsview, Ont. (near Toronto). The major emphasis is in the field of aviation medicine, but investigations include such problems as blood substitutes, infection and immunity, burns and wounds, nutrition and other factors likely to hinder a military man's ability to perform his duties effectively. Operational research, which may be defined as the application of techniques of scientific research to problems which arise in the Armed Services in the execution of their operational roles, is conducted by the Operational Research Group consisting of a headquarters section and three research sections; in addition there are three operational research organizations in the Armed Forces, staffed largely by personnel from the Defence Scientific Service. The Board continued to support active programs of research into methods of estimating, recovering and fabricating such useful metals at titanium, etc. The titanium program is a series of integrated research projects conducted by the Mines Branch of the Department of Mines and Technical Surveys and the Universities of Toronto, Laval and Montreal, in co-operation with various industrial firms with long experience in this field. In addition to aeronautical research conducted by the National Aeronautical Establishment, the Defence Research Board supports an extensive program on aeronautical and gas dynamics problems at various Canadian universities. Special weapons research is conducted in the atomic, biological and chemical fields at the Defence Research Chemical Laboratories, Shirley's Bay, Ont., the Suffield Experimental Station, Ralston, Alta., the Defence Research Kingston Laboratories at Barriefield, Ont., and at a Department of Agriculture Isolation Station located on Grosse Ile, an island in the St. Lawrence, near Quebec City.

Pursuing its established policy, the Defence Scientific Service continues to make available to the scientific community at large all results of its work other than those of purely military importance.

Close liaison is maintained between the Defence Research Board and the Department of Defence Production to ensure that research and development activities are closely integrated with production.

Section 2.—Services Colleges and Staff Training Colleges

Canadian Services Colleges.—The Royal Military College of Canada was founded in 1876 at Kingston, Ont. Royal Roads was established in 1941, near Victoria, B.C., as a school for naval officers. In September 1948, both colleges were constituted as the Canadian Services Colleges under the presidency of the Minister of National Defence to provide a joint educational and training program that would produce officers for the three Armed Services of Canada. To these has been added the Collège Royal Militaire de Saint-Jean, located at St-Jean, Que.; established principally to assist in the training of French-speaking candidates, it was formally opened by the Governor General in the autumn of 1952.

The course for technical officer candidates at the Colleges is of four years duration. Cadets of the Collège Royal Militaire take a preparatory year. The first two years of the course run concurrently at all three colleges. Cadets who have taken the first two years at Royal Roads or cadets who have taken the preparatory and first two years at the Collège Royal Militaire, if they are selected to take the full course, proceed to the Royal Military College for the last two years of the general or engineering courses.

Autumn, winter and summer terms make up the college year of 11 months, with the exception of the fourth year at RMC which has no summer term. From September to May, the autumn and winter terms, 85 p.c. of the instructional time is allotted to academic subjects and the remainder to military subjects including drill and physical training. The summer term, May to mid-August, is devoted to practical service training at Navy, Army or Air Force establishments.

Cadets enter the Canadian Services Colleges as regular force cadets under the terms of the Regular Officer Training Plan introduced during the summer of 1952; a few cadets who have won Dominion Cadetships may enter as reserve cadets. The Regular Officer Training Plan enrols each cadet in the branch of the Armed Services of his choice, and provides a university education, with pay, at one of the Services Colleges or at a Canadian university. On successful completion of his academic and military training, the cadet is granted a commission in the regular force.

Completion of Services College training qualifies a cadet for a commission in a non-technical branch of the three Services. A regular force cadet of a technical branch, upon completion of the four-year Services College course, may be sent to a specified university at public expense for training to science degree standard.

For admission to a Services College a candidate must be a Canadian citizen or other British subject, resident in Canada. A candidate for admission to the Royal Military College, Royal Roads or to the first senior year at Collège Royal Militaire de Saint-Jean must have reached his 16th but not his 21st birthday, on Jan. 1 of the year of entry. A candidate for admission to the preparatory year at Collège Royal Militaire de Saint-Jean must have reached his 16th but not his 20th birthday on Jan. 1 of the year of entry. A specified standard of physical fitness is required of all applicants. The academic requirements for admission to Royal Military College, Royal Roads, and the first senior year at Collège Royal Militaire are:

> University senior matriculation (or equivalent) in the following subjects: English, physics, mathematics (algebra, geometry and trigonometry), chemistry, and either history or a language (French for English-speaking candidates and English for French-speaking candidates).

The academic requirement for preparatory year at the Collège Royal Militaire is junior matriculation (or equivalent) including chemistry and a language (French for English-speaking candidates and English for French-speaking candidates).

Candidates are medically examined and take educational tests at one of the six regional centres. In addition, each candidate appears before a Board composed of a member of the directing staff of one of the Colleges and a representative of each of the three Services.

Of the cadets entered in the Canadian Services Colleges, one-half are selected on provincial quotas determined by population; the other half, in open competition. Academic standing and the recommendations of the Service Boards as to the physical and personal characteristics of the candidates are the bases for selection with the final selection being made by a board of senior officers appointed by the Minister of National Defence.

Fifteen Dominion Cadetships, valued at $580 each, are offered by the Federal Government each year to the sons of certain ex-service or service personnel. These cadetships are available to cadets on the basis of five to each of the three Services, and cover the total cost of lodging, uniform clothing, tuition, etc., in the first year. In addition, a number of other scholarships and bursaries, sponsored by private associations, are available to assist qualified cadets. Cadets attending the Colleges as members of the regular forces are not eligible for cadetships, scholarships and bursaries, as the cost of their education is fully met from public funds.

During the 1953-54 academic year, Royal Military College had 97 cadets in first year, 78 in second, 106 in third and 78 in fourth. Royal Roads had 82 cadets in first year, and 69 in second. The Collège Royal Militaire had 134 cadets in the preparatory year and 78 in first year.

Staff Training Colleges.—The Canadian Army and the Royal Canadian Air Force operate colleges to give staff and command training; the National Defence College provides facilities for advanced study of defence problems.

The National Defence College, Kingston, Ont., which was opened on Jan. 5, 1948, is a senior defence college providing an 11-month course of study designed to cover the economic, political and military aspects of the defence of Canada. Senior officers and civil servants from the Armed Forces and Government departments attend as well as one or two representatives from industry. An extensive lecture course is provided, with lecturers chosen from leaders in various fields in Canada, the United States, the United Kingdom and other countries. In addition, educational tours and visits to parts of Canada, the United States, Europe and the Middle East are made to give students more knowledge of conditions and influences in their own and other countries. The seventh course commenced Sept. 1, 1953, and was completed July 24, 1954, with a total of 27 students attending. Two were chosen from the RCN, four from the Army, four from the RCAF, and one from the Defence Scientific Service. The Department of External Affairs sent two students and the Departments of National Defence, Transport, Trade and Commerce, Defence Production, and Resources and Development* sent one student each, as did the National Research Council, the Royal Canadian Mounted Police and the Canadian Broadcasting Corporation. The United Kingdom and the United States each sent three representatives.

The Canadian Army Staff College, Kingston, Ont., is a military staff College operating on a permanent basis to train officers for positions of staff and command. The course extends over 10 months. A joint instructional staff includes faculty members from the three Canadian Services, the United States and the British armies. The student body is comprised of members from the three Services and from five different nations. Aside from purely military subjects, the curriculum provides for study of current world affairs and lectures by prominent guest speakers in this field. Graduates are qualified for Grade II Staff appointments of Commands in the Service.

The Royal Canadian Air Force Staff College, Toronto, Ont., is a permanent Air Force staff college providing a training program designed to give officers of Squadron Leader to Group Captain rank the necessary background and knowledge to fit them for staff and command positions. The Directing Staff includes officers from the Royal Canadian Air Force, the Canadian Army, and the Royal Air Force, while the student body consists of officers from the Royal Canadian Navy, the Canadian Army, the Royal Canadian Air Force, the Royal Air Force, and the United States Air Force. Besides the normal organizational and administrative subjects, the curriculum includes an advanced study of the three aspects of air power; air strategy and its relation to ground and sea forces; current world affairs and their effect on the Canadian strategic position. Subjects are presented and discussed under the guidance of the Directing Staff or guest speakers, many of whom are prominent in Canadian and United States diplomatic, military, university and industrial life.

PART II.—DEFENCE PRODUCTION†

Department of Defence Production.—This Department was established on Apr. 1, 1951, to carry out the procurement functions of Canada's expanded defence program following the outbreak of hostilities in Korea. The Department took over the responsibilities for the procurement of most goods and services required by the Canadian Armed Forces, and, by arrangement, acted as agent in connection with the purchases required by the Canadian civil defence program and the buying required by the Canadian Commercial Corporation, a Crown company primarily responsible for the purchase of goods in Canada for foreign governments. Under the Defence Supply Act and the Essential Materials (Defence) Act, the Department also became responsible for the provision of an adequate supply of essential materials to support the defence procurement program.

The Department now has two major types of units relating directly to defence procurement. The first represents six production Branches which deal with commodities requiring special facilities for their production. These include aircraft, electronics, ships, ammunition, machine tools, and guns. The second is the General Purchasing Branch which procures commodities either of a standard commercial type or having specifications not greatly different from commercial ones. Examples of these items are clothing, food, fuels and barrack stores. One of the original activities—that relating to the provision of essential materials—is no longer handled by this Department, having been transferred to the Department of Trade and Commerce at the end of 1953. Defence Construction (1951) Limited, a Crown company associated with this Department, is responsible for defence construction activities.

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* Superseded by the Department of Northern Affairs and National Resources in December 1953.

† Prepared by the Economics and Statistics Branch, Department of Defence Production, Ottawa.

Orders and Expenditures.—In the first three years of the current defence program, the Canadian Government has placed about $3,882,000,000 worth of defence orders. Against these, and some orders outstanding when the Department was established on Apr. 1, 1951, a total of $3,262,000,000 has been spent. Table **1** shows that the peak of defence orders occurred in the first year of the three-year program when about $1,625,000,000 worth of orders were placed. The value of orders fell off to $1,263,000,000 during the following year, and declined further to $994,000,000 in the fiscal year 1953-54. The rate of expenditure, shown in Table **2**, reached a peak level of $1,235,000,000 in the fiscal year 1952-53 from $904,000,000 during 1951-52. Canadian Government defence expenditure totalled $1,123,000,000 in 1953-54.

1.—Canadian Government Defence Orders, by Program, Years Ended Mar. 31, 1952-54

Note.—Figures exclude stockpiling and capital assistance.

Program	1951-52	1952-53	1953-54
	$'000	$'000	$'000
Aircraft	579,289	533,224	384,756
Shipbuilding	114,898	59,565	95,194
Tank—automotive	65,110	102,364	53,043
Weapons	93,517	23,711	13,100
Ammunition and explosives	104,483	75,846	69,011
Electronics and communication equipment	98,954	96,419	119,068
Fuels and lubricants	34,701	43,561	48,469
Clothing and equipage	149,499	31,783	19,081
Building supplies and equipment	29,289	3,853	3,688
Construction	187,011	153,919	77,548
Other programs	99,781	83,988	59,540
District office orders	68,294	55,109	51,550
Totals	**1,624,826**	**1,263,342**	**994,048**

About 39 p.c. of Canadian defence orders, were placed in connection with the aircraft program. The other important programs in terms of the value of orders placed were: defence construction, electronics and communication equipment, shipbuilding, and ammunition and explosives. The aircraft program continues to involve the largest proportion of orders and expenditures because of the importance of air protection in the defence of Canada.

2.—Canadian Government Defence Expenditures, by Program, Years Ended Mar. 31, 1952-54

NOTE.—Figures exclude stockpiling and capital assistance.

Program	1951-52	1952-53	1953-54
	$'000	$'000	$'000
Aircraft	244,462	361,984	454,477
Shipbuilding	60,917	100,555	106,345
Tank—automotive	40,201	97,717	48,846
Weapons	28,726	25,543	26,182
Ammunition and explosives	26,157	33,352	44,323
Electronics and communication equipment	49,927	89,704	96,495
Fuels and lubricants	28,050	37,058	43,965
Clothing and equipage	78,835	88,723	32,634
Building supplies and equipment	20,674	12,411	11,811
Construction	133,897	209,652	130,700
Other programs	192,350	178,407	126,882
Totals	**904,196**	**1,235,106**	**1,122,660**

Table 3 shows Canadian Government defence orders according to the countries in which they have been placed. During the three-year period Apr. 1, 1951, to Mar. 31, 1954, 12 p.c. were placed in the United States and 3·5 p.c. in the United Kingdom. The largest value of orders placed in the United States occurred during the first year of the defence program, and the largest value placed in the United Kingdom occurred during the fiscal year 1952-53. Almost two-thirds of the orders placed in the United States have been for complete aircraft or equipment for installation in aircraft. The complete aircraft have included Fairchild C-119 transports, Expediters, Mitchells, Avengers, Neptunes, Banshees, and some types of helicopter. Aircraft equipment has included J-47 jet engines for earlier versions of the F-86 Sabre, and electronic gear, armament and other equipment for the Sabre, the CF-100, and the T-33 aircraft. Various other electronic equipment accounted for a further one-fifth of the defence orders placed in the United States, the more important items being the M-33 anti-aircraft fire control systems, sonobuoy receivers, sonar equipment, and early-warning airborne radar sets. The remaining orders placed in the United States were accounted for mainly by weapons, ammunition, machine tools, and tank-automotive programs. Those placed in the United Kingdom were for Centurion tanks, Nene jet engines, and the aircraft carrier *Bonaventure.*

3.—Distribution of Canadian Government Defence Orders, by Countries in which Placed, Years Ended Mar. 31, 1952-54

NOTE.—Figures exclude stockpiling and capital assistance.

Country	1951-52	1952-53	1953-54
	VALUES		
	$'000	$'000	$'000
Canada	1,290,037	1,116,424	859,880
United States	296,761	68,852	107,388
United Kingdom	37,982	71,685	25,080
Other countries	46	6,381	1,700
Totals	**1,624,826**	**1,263,342**	**994,048**
	PERCENTAGES		
	p.c.	p.c.	p.c.
Canada	79·4	88·4	86·5
United States	18·3	5·4	10·8
United Kingdom	2·3	5·7	2·5
Other countries	[1]	0·5	0·2
Totals	**100·0**	**100·0**	**100·0**

[1] Less than 0·05 p.c.

Besides buying such defence equipment in other countries, Canada at the same time has exported large quantities of defence items. Such aircraft as the F-86 Sabre jet fighter, the Harvard and the T-34 trainers, the Beaver, and the Otter have been exported to the United States. The 3-inch 50-calibre mounts and guns, the 120-mm. gun and the Bren machine-gun have also been produced in Canada for the United States. Other items ordered by the United States Government have included shells and cartridge cases for the most modern U.S.-type ammunition, explosives and propellant powders, and mobile communication equipment. Canada has also produced many items such as Sabre jet-fighters, aircraft-engines, guns, ammunition and electronic equipment for the North Atlantic Treaty Organization, under the Canadian Mutual Aid program.

Aircraft Program.—The production of jet-fighter aircraft continued to be the major factor in the aircraft program during the year 1954. Production efficiency has resulted in an increased rate of output, at decreased costs, of the Canadian designed and developed all-weather jet interceptor fighter, the CF-100. The development of a more powerful armament system has continued with considerable success and with the addition of this increased firepower the CF-100 will be one of the most heavily armed fighters in existence. Production of the F-86 Sabre V jet fighter fitted with the Orenda engine continued on schedule for delivery to the

RCAF in Canada and abroad. An improved version of the F-86, the Sabre VI, came into production and initial deliveries were made late in 1954. The development of an advanced series of Orenda engines for these two Sabre fighter aircraft was completed and went into production following acceptance by the RCAF. Production of the T-33 jet trainer, powered with the Rolls-Royce Nene engine, has continued on schedule. The initial requirements of the RCAF for this aircraft have been met but production is continuing at a reduced rate and the Nene engines, manufactured in the United Kingdom, have been delivered on schedule. Deliveries of this aircraft have been made both to the RCAF and to the United States Air Force. Facilities for the production of the Nene engine have been set up in Canada, the first Canadian-built engine passed its type test and all Nene engines subsequently produced in this country have been accepted by the RCAF. A considerable number of L20A Beaver aircraft have been delivered to the RCAF and the United States Air Force.

During the year 1954, the Harvard production line was shut down following completion of the Harvard trainer program but some of the production capacity thus made available was taken up by the production of the T-34 single engine primary trainer. During 1954 also, engineering and tooling necessary to convert the Bristol-Britannia civilian transport to a maritime reconnaisance aircraft for the RCAF got well under way, as well as tooling for the Grumman S2F carrier-borne anti-submarine aircraft. A number of helicopters have been purchased to meet the increased demands of the Armed Services for this type of aircraft.

Canadian facilities for the manufacture of artificial horizons, altimeters, machmeters, airspeed indicators, accelerometers, rate-of-climb indicators, pressure transmitters and indicators, and compasses have been established and are well maintained. The quality of the items manufactured by these Canadian facilities is of a very high standard and all items have fulfilled the exacting requirements of RCAF quality control. One particular design of detachable end fittings for aircraft flexible hose has been standardized and two Canadian companies have met the stringent qualification tests. Canada is now self-supporting in this field. Aircraft tires, which are subject to severe wear because of high-speed landings, are to be produced in Canada, with the exception of some extremely high-speed tires for jet aircraft. In the near future, all such tires may be handled in Canada, utilizing the very latest processes.

The major reconditioning programs, started in 1951-52, have been completed and there has been a general decrease in repair work. This reduction has not yet had any great effect on the repair contractors as the establishment of repair facilities across Canada was planned with a view to creating an industry which could operate economically under normal conditions and yet be capable of quick expansion to meet emergency requirements. A facility for the overhaul of Orenda jet engines has been established in the United Kingdom to handle the requirements of the RCAF Divisions in Europe.

Electronics and Shipbuilding.—The development and production of electronic and ancillary electrical equipment is an important part of the Canadian defence procurement program. During the 1954 period, electronic requirements included a vast range of items from large radio and radar equipments to small complex units and components. The major portion of the electronic equipment required for Canadian defence is now being produced in Canada. These items include fixed airborne and shipboard radar, gunfire control, gunsights, identification radar, flight simulators, radio navigational aids, radio compasses, radio communication sets, training aids, anti-submarine detection equipment, etc. An increasing amount of the components of electronic end items are also being produced in Canada. An important feature of the electronics program has been the creation of the continental radar defence system in collaboration with the United States. Most of the radar and communication equipment for this project has been manufactured in Canada.

In the shipbuilding program, deliveries continued to be made during the past year of the distinctly Canadian-designed non-magnetic coastal minesweepers and converted World War II frigates. The coastal minesweepers are designed to cope with the latest known developments in enemy mines. The original non-magnetic coastal minesweeper (AMC) program, consisting of 14 new ships, was completed during 1954. Six of these minesweepers were assigned to NATO countries. The converted frigates are completely new except for propulsion and auxiliary machinery and the bare hull up to deck level. These ships are fitted with modern anti-submarine armament. Work has also been progressing on the construction of anti-submarine destroyer escorts. The Arctic patrol vessel, the *Labrador*, which is the first specifically designed Canadian ship for Arctic duty, was accepted by the Navy in 1954 and successfully completed its first mission through the Arctic. Many types of auxiliary craft, such as 150-foot seagoing tugs, looplayers, steel crane lighters, inner patrol vessels, 75-foot harbour craft, RCMP vessels, clearance diving vessels, and ammunition lighters are being constructed as part of the shipbuilding program. In addition, many small miscellaneous craft, such as whalers, 27-foot seaboats, steel crashboats, dinghies, etc., are being produced. The aircraft carrier, *Bonaventure*, which is to replace the *Magnificent* on loan from the Royal Navy, is being built in the United Kingdom. Delivery of this light fleet-carrier is expected in 1956.

Weapons and Ammunition.—Progress in the production of weapons has been highlighted by the completion of deliveries during 1954 on four major projects. The 0·5-inch Browning machine-gun for the RCAF, the 120-mm. gun for the United States Army, and the 3-inch 50-calibre twin mounts for the Canadian and United States Navies were made in Canada but the 155-mm. gun was purchased in the United States because of the limited numbers involved.

Scheduled deliveries were met in the case of five other weapons, viz., a small arms item for the United States Army, an anti-submarine mortar for the Royal Canadian Navy, two calibres of mortars for the Canadian Army, and a trial order of light automatic rifles from Belgium. Early in 1954, an agreement was reached among the principal Western nations to adopt a standard cartridge for small arms. This new ammunition is of slightly smaller calibre than that being used by the Canadian and United Kingdom Forces, and a set of manufacturing drawings for a new rifle is being produced.

Production on a wide variety of complete rounds of artillery, mortar, small-arms, pyrotechnic and underwater ammunition has been an important part of the ammunition program. Production in volume of some items was reached for the first time during the past year. Complete round production in 1954 has included nine basic types of small calibre cartridges, nine general types of artillery and mortar ammunition, three types of rockets, and various types of underwater and pyrotechnic stores. Production has also commenced of small air-to-air rockets. As the program for more versatile explosives manufacture develops in Canada, the need for foreign purchases of complete rounds of explosives inserts is expected to diminish. A nitroglycerin plant was completed in 1954, and work proceeded toward the manufacture of solventless cordite and double base cast or extruded rocket propellants. Shells and cartridges were produced for the United States Government and new orders received for picrite and hexachlorathene. In addition to metal ammunition components, NATO countries were supplied with flashless cordite, rifle powder, Composition "B", and picrite.

General Purchasing.—The general purchasing program involves the procurement of a wide range of items required for clothing, equipping, feeding, maintaining and servicing the Canadian Armed Forces. This has involved the procurement of many types of defence supplies and services, including textiles and all types of clothing, footwear and leather goods, military pattern, standard commercial and special commercial vehicles, together with parts, replacements, and the reconditioning of service vehicles, food and catering services, furniture and furnishings, petroleum products and hard fuels, medical and dental supplies, research and development projects, building supplies, and all types of barrack stores and other related items.

Special requirements purchased for other governments, Canadian and international agencies, include wheat and flour for the United Kingdom, West Germany and Ceylon, and mechanical transport equipment for the United States. Purchases were also made for stores and products in connection with the contribution of Canada, under the Colombo Plan, to the governments of India, Pakistan, and Ceylon. These have included the purchase of steam and diesel locomotives, agricultural equipment, electric generators, and supplies for a hydro-electric project to serve a large area of Ceylon.

The District Purchasing Offices of the General Purchasing Branch are responsible for the purchase of food and other defence supplies and services of a local or urgent nature, which are required by the Department of National Defence establishments located in the vicinity of the District Office. The principal purchases include food, hardware, electrical and building supplies, electrical and electronic equipment, and barrack stores. Service contracts are arranged for repairs to buildings and to ships, laundry and dry cleaning, repairs to footwear and clothing, coal hauling, disposal of ashes and refuse, snow removal, transportation, and other related requirements.

New Production Facilities.—Technological developments in military equipment which have taken place since World War II, and the desirability of making a greater variety of component parts in Canada have necessitated the establishment of new production facilities in this country. By building new plants or, more frequently, by the installation of new machinery and equipment, Canada has been able to maintain a higher rate of defence production with less dependence on outside sources of supply. Private industry was encouraged to set up these defence production facilities by being granted additional capital cost allowances (commonly known as "accelerated depreciation") for income tax purposes. Many of the applications for these allowances have been for the expansion of facilities to produce basic materials required for the defence program. More recently, however, there have been an increasing number of applications in connection with facilities for direct defence production.

Where it has not been practical for private industry to invest in the new facilities necessary for defence production, capital assistance for machinery and equipment or, in a few instances, for buildings has been provided by the Government. During the three-year period Apr. 1, 1951-Mar. 31, 1954, about $167,000,000 was spent in capital assistance, almost one-half of which was spent in the fiscal year 1952-53 but most of the projects requiring capital assistance have now been completed. The greater portion of capital assistance has been in the aircraft field, where opportunities are limited for commercial production. Crown-owned machine tools and equipment have also produced such items in Canada as complete sets of propulsion machinery for escort vessels, proximity fuses, gauges, and other specialized types of equipment. Wherever practical, private industry has been encouraged to take over ownership of these facilities by purchasing them from the Crown. To maintain Canada's industrial mobilization base, contracts covering the sale of Crown-owned defence properties contain a proviso that the facilities will be available to produce defence items when required for a minimum period of ten years.

PART III.—CIVIL DEFENCE

The accelerating threat of aggression that began shortly after the completion of demobilization following World War II made necessary the reorganization of military strength. It also made apparent the need for the development of a plan of civil defence as part of Canada's program of defence against direct attack. Thus, in October 1948, the Minister of National Defence appointed a Co-ordinator of Civil Defence whose task it was to prepare such a plan. To assist in the co-ordination of the planning, an interdepartmental committee—the Federal Civil Defence Planning Committee—was established, as well as a Federal-Provincial Advisory Committee composed of the Federal Minister responsible for civil defence as Chairman and each Provincial Minister responsible for civil defence as members. In February 1951, the administration of civil defence was transferred from the Department of National Defence to the Department of National Health and Welfare.

The Canadian plan was developed after study of similar organizations in the United Kingdom, Western Europe and the United States. It was agreed that civil defence organization should be incorporated within the framework of civil government at each level—federal, provincial and local—each with its own sphere of responsibility. In general, each province is self contained and is divided into a number of areas, with the fundamental idea of mutual support to any disaster region; some areas are organized on a basis of mobile support and reception only. The channel of communication is from the federal authority to provincial authority and thence to local authority.

The Federal Office of Civil Defence consists of the Civil Defence Co-ordinator and the following services: operations and training; administration and supply; health planning; welfare planning; communications and transportation. A number of other federal departments are involved in planning, such as the Royal Canadian Mounted Police, the Department of Agriculture, Department of Transport and the Defence Research Board.

In co-operation with the Royal Canadian Air Force, an early warning system has been established in the more vulnerable areas where sirens have been provided by the Federal Government. In co-operation with the Departments of National Defence and Veterans Affairs, a program of stockpiling medical supplies and equipment is in progress across Canada.

A Federal Civil Defence Training School was started in January 1951, at which courses were given for organizers, general and rescue instructors, and radiological monitors. In March 1954, this school, renamed the Canadian Civil Defence College, was set up in permanent location at Arnprior, Ont., and courses have been continued and expanded into such fields as tactics, emergency feeding and accommodation, technical reconnaissance, and disaster studies. A number of specialist courses have been conducted across the country by the Health Planning Group.

Up to the end of July 1954, 4,929 persons had received training in one or other of these various fields. First Aid training for civil defence workers is undertaken by the St. John Ambulance Association, under an agreement between the Federal Government and the Association whereby the Government pays a per capita grant. Other agreements for co-operation are in force between the Federal Government and the Canadian Red Cross Society, the Canadian Legion and the Boy Scouts Association.

A Financial Assistance Program is in operation which provides each province with a quota of moneys based on population and vulnerability in which 50 p.c. of the cost is contributed by the Federal Government to approved projects shared between a municipality and a province. A minimum of 25 p.c. is contributed direct to a municipality for a similar project in which the provincial government does not share. Also, the Federal Government has offered to bear one-third of the cost of standardizing fire-hose couplings. To date, the Provinces of Ontario, Alberta and British Columbia have accepted the offer and are proceeding with a standardization program. Large quantities of training equipment including rescue and fire-fighting vehicles have been provided by the Federal Government to the provinces in order to foster their training programs. Draft agreements have also been forwarded to all provinces, on an equal basis, in paying workmen's compensation, where necessary, to a civil defence worker; an agreement to this effect has been signed with the Provinces of Ontario, British Columbia and Alberta.

Up to the end of March 1954, 19 civil defence manuals were published by the Federal Civil Defence authorities to assist in the organization, training and general education of civil defence personnel, and nine others were in preparation. In addition to these a considerable amount of guiding literature was issued to assist provincial and local governments.

Each province has developed its own civil defence organization, patterned on that of the Federal Government. Certain provinces have conducted civil defence training courses, similar to those of the Federal Government, with the object of training local instructors and key personnel.

Many of the main centres of population have made considerable advances in organization and training. An estimated 162,000 civil defence workers for the whole of Canada were reported on strength as at Mar. 31, 1954.

In 1951, an agreement was made between Canada and the United States whereby each country pledged itself to go to the assistance of the other in the event of attack and a United States-Canada Civil Defence Committee was set up. A number of working groups were also formed to carry out specific tasks in the development of ways and means of carrying out this agreement. The Provinces of Canada, too, have discussed with adjoining States of the United States the working out of their mutual problems. Close liaison is maintained with the United Kingdom and other NATO countries.

CHAPTER XXIX.—SOURCES OF OFFICIAL INFORMATION AND MISCELLANEOUS DATA

CONSPECTUS

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PART I.—SOURCES OF OFFICIAL INFORMATION

Section 1.—Federal Government Information Services

The chief source of statistical information on all phases of the economy of Canada is the Dominion Bureau of Statistics where the ten-year and five-year censuses of Canada are planned and statistical information of all kinds—federal and provincial—is centralized. In regard to information that is not mainly statistical, the individual Department concerned with the particular subject should be contacted as indicated in the Directory at pp. 1282-1309. Certain Government bodies and national agencies, because of the nature of their work and the appeal it has to broad sections of the population, are organized primarily as information or publicity agencies. Among these are: the Information Division, Department of External Affairs, which deals with questions about external affairs originating in Canada and with general requests originating abroad for information on Canada and Canadian affairs; the Information Branch, Department of Trade and Commerce; the Information Services Division, Department of National Health and Welfare; the Canadian Broadcasting Corporation; and the National Film Board. (*See* Index.) The Departments of Agriculture, Northern Affairs and National Resources, and Mines and Technical Surveys, while not thus classed, are interested in the dissemination of information to a greater extent than most other Government Departments, though several of them have publicity branches or public relations divisions.

Government Departments, with few exceptions, issue their own lists of reports and publications. Departments are required by statute to publish annual reports, which are tabled each year in the House of Commons by their respective Ministers. However, for the purpose of this Section, only the services of the six information agencies mentioned above are described.

Section 2 has been prepared for the purpose of presenting to the reader a directory of all sources of information, federal and provincial, thereby directing him to the proper channels from which he may draw material relating to any particular subject.

The Dominion Bureau of Statistics.—The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V, c. 43). In 1948, this statute, which had been consolidated as the Statistics Act (R.S.C. 1927, c. 190), was repealed and replaced by the Statistics Act (R.S.C. 1952, c. 257), subsequently amended in March 1953 (1-2 Eliz. II, c. 18).

The chief aims of the Dominion Bureau of Statistics are: (1) to furnish statistical data, bearing on Canada, for government and administration, whether municipal, provincial, national or international; and (2) to assist in meeting the needs of non-governmental users of statistics, arising from a growing awareness of the value of statistics to business efficiency and social security.

Inquiries.—Hundreds of individual requests for information are received in the Bureau each day, routed through the appropriate divisions and answered as expeditiously as possible. Since the field of effort, from the statistical side, deals with all phases of the national economy, there is scarcely a subject upon which the Bureau is not able to give some information. Nevertheless, only inquiries of a statistical nature should be directed to the Dominion Bureau of Statistics.

Publications.—The Dominion Bureau of Statistics is the principal publication agency of the Federal Government; the subjects of its reports cover all aspects of the national economy.

The policy with regard to the distribution of publications is to extend the service to the public as widely as possible at a minimum cost. A special subscription rate of $30 per annum entitles a subscriber to receive, as issued, a copy of each report, including the daily News Bulletin. Statistical information not of general interest is published in the form of Reference Papers or Memoranda for which additional annual subscription rates are charged of $5 and $15, respectively.

A complete list of DBS publications is available from the Dominion Statistician. Orders for reports should be sent to the Dominion Bureau of Statistics, Ottawa, giving the correct title or titles of the publication or series of reports in which the applicant is interested and should include the necessary remittance in the form of a cheque or money-order made payable to the Receiver General of Canada.

Information Division, Department of External Affairs.—The Information Division has two functions: to promote within Canada interest in and knowledge of international affairs, and to make Canada and Canadian policies better known and understood abroad.

To perform the first function, the Division produces and distributes various documents on external affairs—statements of government policy and reports on related developments abroad and on the work of the Department generally. The Division also answers inquiries from Canadian sources on these subjects (except for inquiries from the press which are handled by the Department's Press Office) as well as requests for information about Canada made by Diplomatic Missions at Ottawa, by Canadian posts abroad, and by individuals and organizations in other countries.

Most of the information work abroad is done, however, by officials at Canadian posts. The Information Division assists by formulating and advising on information policy abroad, in an effort to ensure that this policy is related to the general objectives of Canadian foreign policy, and by producing and procuring material to keep Missions informed of developments within Canada. Journalists and others who visit Canada to write of Canadian affairs are given assistance from time to time by the Division; its responsibilities also include the co-ordination of the Government's activities in the field of cultural relations.

Information Branch, Department of Trade and Commerce. — For details *see* p. 1098.

Information Services Division, Department of National Health and Welfare.—The responsibility of this Division, in co-operation with other divisions of the Department of National Health and Welfare and provincial authorities, is the production and distribution of educational material on health, welfare, social security and civil defence, for use throughout the country. This information, issued in the English and French languages, includes books, pamphlets, periodicals, posters, exhibits, displays, radio dramatizations, press and magazine features and releases, as well as films and film-strips prepared in co-operation with the National Film Board. Books, pamphlets, posters and displays are distributed in Canada through provincial authorities. The most important periodicals published by the Division are *Canada's Health and Welfare* (monthly), *Canadian Nutrition Notes* (monthly), *Occupational Health Bulletin* (monthly), *Industrial Health Review* (semi-annually) and *Nutrition Bulletin* (annually).

Canadian Broadcasting Corporation.*—Radio broadcasting is an important medium of information to the public along with newspapers, films and other means of communication. Radio broadcasting in Canada is a combination of a publicly owned national system and privately owned local community stations, many of which are affiliated with the Canadian Broadcasting Corporation's networks.

Since its establishment in 1936, the Canadian Broadcasting Corporation has become one of the most effective channels through which information, official and unofficial, is broadcast to the people of Canada. Radio is relatively more important in Canada than in most other countries, because of the widely distributed population and the number of sparsely peopled areas, and the CBC has gradually bridged the gaps with high-powered transmitters designed to serve rural as well as urban areas. The CBC has also pioneered in the development of low-powered repeater stations, attached to the network lines, that serve areas unable, because of topographical conditions, to receive an adequate signal from any existing station.

News broadcasts and information programs occupy a considerable proportion of national and regional network time and include news, drama, informative talks, children's programs, school broadcasts, public-service broadcasts, sports, women's activities, etc. Listeners have a very wide range of radio fare, since the CBC not only produces its own programs in the various production centres across Canada, but brings in selected programs from the networks in the United States, the British Broadcasting Corporation, and other national radio systems. The CBC maintains a bureau at London, England, and at United Nations Headquarters, New York, and is credited with having done more to inform listeners of the United Nations' activities than any other broadcasting system.

Through the International Shortwave Service, operated by the CBC on behalf of the Canadian Government, programs are broadcast in sixteen languages: English, French, German, Dutch, Danish, Norwegian, Swedish, Finnish, Italian, Spanish, Portuguese, Czech, Slovak, Russian, Ukrainian and Polish. The CBC International

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* *See* also pp. 931-937.

Service broadcasts information abroad on life and economic conditions in Canada as part of the general information plan for promoting a better understanding of Canada in other countries. The CBC shortwave transmitters at Sackville, N.B., transmit a signal unequalled in Europe by any other transmitted from the North American Continent.

The National Film Board.—The National Film Board provides information on a great variety of subjects in the form of films, film-strips and still photos. In keeping with its terms of reference, the Board's products are both informative and interpretative and are widely distributed, theatrically and non-theatrically. (*See* also Educational and Cultural Functions of the National Film Board, pp. 350-351.)

As a service to government departments, the Board maintains a film preview library of 4,000 prints where films may be screened with a view to purchase or for informational purposes. Some 500 film-strips are catalogued. The Board also maintains libraries of films on specialized subjects such as health, sociology, medicine and industry.

The Board has over 25,000 motion picture prints on deposit in more than 380 local libraries across the country. Additions to the libraries are circulated in preview blocks to film councils and circuit users before being deposited in a central library. Approximately 20,000 prints have been made available in libraries abroad, both in posts of the Departments of External Affairs and Trade and Commerce and in universities and other loan agencies. Libraries of films and film-strips are maintained in the Board's offices at New York and Chicago, U.S.A., and at London, England.

The Board's library of approximately 100,000 still photos serves government departments, commercial photographers and newspapers and periodicals in Canada and abroad.

Section 2.—Directory of Sources of Official Information (Federal and Provincial)

To make the best use of the Directory of Sources of Government Official Information, it is necessary that the reader understands the broad differences in function between federal and provincial departments and their separate fields of work.

Certain fields of effort, such as trade and commerce, customs and excise, currency and banking, navigation, transportation, radio, census of population, national defence, etc., are constitutionally federal affairs and, in such fields, the respective Departments at Ottawa are the proper sources with which to communicate. Other fields of effort, such as the administration of lands and natural resources, education, roads and highways, and health and hospitals are the responsibility of the provinces, under the British North America Act, but certain Federal Departments are also concerned with specific aspects of these subjects and, as is the case of the Dominion Bureau of Statistics, in the co-ordination and presentation of the material for Canada as a whole.

As a general guide to the public, it may be pointed out that questions relating to the actual development and administration of resources should be forwarded to the particular provinces concerned. The Federal Government, while not administering the resources within provincial boundaries, co-operates closely with the provinces and is in a position to furnish material for Canada, especially production data, on a national basis, marketing data on international, national and provincial bases, research work and experimental station data on a national basis, and also on a provincial basis from Federal Government stations located within particular provinces. In agriculture, for instance, data on the breeding of live stock and the improvement of strains, on agricultural marketing and on crop yields are cases in point; in forestry, questions of forest research, forest-fire protection and reforestation offer good examples. Inquiries directed to federal sources for information not of a statistical nature should, as a general rule, be sent to the individual Departments listed in the Directory; in the case of statistical information, inquiries should be addressed to the Dominion Bureau of Statistics, Ottawa.

Under the provisions of the Public Printing and Stationery Act, the Queen's Printer and Controller of Stationery has charge of the sale of all official publications of Parliament and the Government of Canada that are issued for sale, as well as of the free distribution of all public documents and papers to persons and institutions (libraries) entitled by statutory provisions to receive them without payment.

The Queen's Printer and Controller of Stationery issues the *Daily Checklist of Government Publications*, published mainly for administrative convenience. It records all Federal Government publications immediately upon release, for the information of the public service, libraries, etc. All those who are authorized by law or regulation to receive free copies of government publications receive the *Daily Checklist* automatically and without charge. Other persons desiring the service may purchase an annual subscription to the *Daily Checklist*, to be forwarded daily or in weekly batches, as requested.

The *Monthly Catalogue of Canadian Government Publications*, also issued by the Queen's Printer and Controller of Stationery, is a comprehensive listing of all official publications, public documents and papers, not of a confidential nature, printed or "processed" at government expense.

An *Annual Catalogue* comprising all publications listed in the *Monthly Catalogue* was issued Jan. 15, 1955. This is a consolidation by departments of all active titles (older publications still available and not superseded by later editions) issued during 1953 and in previous years. Separate prints of departmental lists of publications included in the *Annual Catalogue* were also made available at the same time.

The Queen's Printer and Controller of Stationery publishes subject catalogues and special bulletins advertising new government publications. The titles of some publications available for free distribution, and obtainable from the issuing federal department, are listed in the *Daily Checklist* and *Monthly Catalogue*. Lists of publications are available from some Government Departments.

Most provincial government printed publications may be obtained from the Queen's Printer of the province concerned. Inquiries should be addressed to the provincial capital cities:—

Newfoundland	St. John's	Ontario	Toronto
Prince Edward Island	Charlottetown	Manitoba	Winnipeg
Nova Scotia	Halifax	Saskatchewan	Regina
New Brunswick	Fredericton	Alberta	Edmonton
Quebec	Quebec	British Columbia	Victoria

Inquiries about the Yukon and Northwest Territories should be addressed to the Northern Administration and Lands Branch, Department of Northern Affairs and National Resources, Ottawa.

DIRECTORY OF SOURCES OF OFFICIAL INFORMATION

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Trade and Commerce Information Branch Dominion Bureau of Statistics Dept. of Mines and Technical Surveys Editorial and Information Division (for mineral resources) Dept. of National Health and Welfare Information Services Dept. of Northern Affairs and National Resources Editorial and Information Division Dept. of External Affairs Information Division (general requests originating in all countries outside Canada) Dept. of Citizenship and Immigration Editorial and Information Division Dept. of Fisheries, Information and Educational Service National Film Board (films, filmstrips, photographs on all subjects) National Research Council Public Relations Branch Dept. of Transport Information Bureau	BROAD GENERAL INFORMATION ON CANADA'S RESOURCES AND INSTITUTIONS	For broad general information in regard to particular provinces application should be made to: **N'f'ld.,** Dept. of Provincial Affairs; **P.E.I.,** Tourist and Information Bureau; **N.S.,** Dept. of Trade and Industry; **N.B.,** Dept. of Industry and Development or Dept. of Provincial Secretary-Treasurer or N.B. Travel Bureau; **Que.,** Bureau of Statistics; **Ont.,** Bureau of Statistics and Research or Dept. of Travel and Publicity; **Man.,** Dept. of Industry and Commerce and Dept. of Provincial Secretary; **Sask.,** Provincial Secretary, Bureau of Publications, or Executive Council, Industrial Development Office, or Economic Advisory and Planning Board; **Alta.,** Publicity Bureau, Dept. of Economic Affairs; **B.C.,** Bureau of Economics and Statistics.
Dept. of Agriculture Information Service Experimental Farms Service (stations and farms throughout Canada) Dept. of Northern Affairs and National Resources (Yukon and Northwest Territories) Dept. of Citizenship and Immigration Indian Affairs Branch Dept. of Labour (immigration and movement of farm workers) Dept. of Veterans Affairs (veterans only) Dept. of Finance (farm improvement loans) Canadian Farm Loan Board (long-term mortgage loans) Central Mortgage and Housing Corporation (long-term mortgage loans) National Film Board (films, photographs) Dominion Bureau of Statistics	AGRICULTURE General and Farming	**P.E.I., N.S., N.B., Sask.:**—Depts. of Agriculture **N'f'ld.:**—Dept. of Mines and Resources **Que.:**—Dept. of Agriculture, Information and Research Branch Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Dept. of Agriculture, Statistics and Publication Branch **Man.:**—Dept. of Agriculture and Immigration, Publications Branch and Extension Service **Alta.:**—Dept. of Agriculture **B.C.:**—Dept. of Agriculture, Dept. of Trade and Industry, Bureau of Economics and Statistics Dominion Bureau of Statistics (summaries of provincial data)
National Film Board (films, film-strips and photographs) Dept. of Citizenship and Immigration Indian Affairs Branch Dept. of Mines and Technical Surveys Editorial and Information Division Geological Survey of Canada Surveys and Mapping Branch Geographical Branch National Research Council Division of Building Research (permafrost, buildings in the north, snow and ice) Dept. of Northern Affairs and National Resources Editorial and Information Division Arctic Division Dept. of Transport (Arctic navigation) Dept. of Fisheries Fisheries Research Board	ARCTIC	**Sask.:**—Dept. of Natural Resources, Northern Administration District

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Dominion Astrophysical Observatory, Victoria, B.C. Dominion Observatory, Ottawa, Ont National Research Council Division of Radio and Electrical Engineering (radio astronomy)	ASTRONOMY	**Sask.:**—University of Saskatchewan, Saskatoon
Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch Atomic Energy Control Board (policy, regulations) Atomic Energy of Canada Limited (research studies, sale of radio-isotopes) Eldorado Mining and Refining Limited National Film Board (films)	ATOMIC ENERGY	**Sask.:**—University of Saskatchewan, Saskatoon
Dept. of Transport Civil Aviation Division (controls, licences and facilities, such as radio aids and licences) Air Transport Board (licensing of commercial air services and the economic regulation of such air services) Bureau of Transportation Economics Trans-Canada Air Lines Dept. of National Defence Directorate of Public Relations (Air Force) Dept. of National Health and Welfare Civil Aviation Medicine Division Dept. of Defence Production Aircraft Branch National Film Board (films and photographs) National Research Council Division of Mechanical Engineering (aeronautical research) Dominion Bureau of Statistics	AVIATION	**Ont.:**—Dept. of Lands and Forests, Air Service **Man.:**—Manitoba Government Air Services **Sask.:**—Saskatchewan Government Airways
Bank of Canada Industrial Development Bank Dept. of Finance Dept. of Insurance (for trust and loan business, administers also the Small Loans Act) Central Mortgage and Housing Corporation Post Office Department, Savings Branch Dominion Bureau of Statistics (summary statistics)	BANKING Trust and Loan Companies	**N'f'ld.:**—Dept. of Finance Supreme Court, Registry of Deeds **P.E.I.:**—Dept. of Provincial Secretary **N.B.:**—Dept. of Provincial Secretary-Treasurer **Que.:**—Dept. of Finance, Insurance Branch Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Province of Ontario Savings Office Attorney-General, Dept. of Insurance **Sask.:**—Provincial Secretary, Registrar of Securities Dept. of Co-operation and Co-operative Development, Credit Union Services **Alta.:**—Government of Alberta Treasury Branches **B.C.:**—Dept. of Finance, Inspector of Trust Companies
Dept. of Justice Superintendent of Bankruptcy Dominion Bureau of Statistics	BANKRUPTCY	**Sask.:**—Provincial Secretary

Sources for Federal Data	**Subject**	**Sources for Provincial Data**
National Library (Public Archives), Ottawa National Library will give information *re* books in libraries of federal departments and branches as well as in other Canadian libraries, also information on current Canadian publications, federal, provincial and trade.	BIBLIOGRAPHY: BOOKS	**N'f'ld.:**—Dept. of Education Public Libraries Board **P.E.I.:**—Dept. of Education Superintendent of Libraries and Director of Adult Education **N.S.:**—Dept. of Education **N.B., Man.:**—Dept. of Education Provincial Librarian **Que.:**—Office of Provincial Secretary Provincial Archives **Ont.:**—Dept. of Education Director of Public Library Service **Sask.:**—Provincial Library Legislative Library **Alta.:**—Dept. of Economic Affairs Library Board **B.C.:**—Dept. of Education Public Library Commission
	BIRTHS *See* "Vital Statistics"	
Dept. of National Health and Welfare Blindness Control Division Old Age Assistance Division Dept. of Northern Affairs and National Resources Director of Old Age Assistance (Northwest Territories) Director of Old Age Assistance and Blind Persons Allowances (Yukon Territory)	BLINDNESS ALLOWANCES	Sources same as for "Old Age Assistance" excepting: **P.E.I.:**—Director of Blind Persons Allowances
	BROADCASTING *See* "Radio"	
Dept. of Public Works Building Construction Branch Chief Architect and Information Services Dept. of Northern Affairs and National Resources Engineering and Water Resources Branch Central Mortgage and Housing Corporation National Research Council, Division of Building Research (materials of construction, building codes, building practice, soil and snow mechanics) Dept. of National Health and Welfare Hospital Design Division Dept. of Defence Production Defence Construction (1951) Limited Dominion Bureau of Statistics	BUILDING CONSTRUCTION	**N'f'ld., N.B.:**—Dept. of Public Works **P.E.I.:**—Dept. of Industry and Natural Resources **Ont.:**—Dept. of Labour, Factory Inspection Branch Dept. of Planning and Development Community Planning Branch **Man., Sask.:**—Dept. of Labour **Alta.:**—Dept. of Industries and Labour Provincial Bureau of Statistics **B.C.:**—Dept. of Finance, Public Housing Dept. of Labour, Factory Inspection Branch Dept. of Trade and Industry Bureau of Economics and Statistics
Department of Transport Canal Services Dominion Bureau of Statistics	CANALS	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Citizenship and Immigration Canadian Citizenship Registration Branch Canadian Citizenship Branch National Film Board (films, filmstrips, photographs)	CITIZENSHIP *See also* "Population"	
	CIVIL AVIATION *See* "Aviation"	
Dept. of National Health and Welfare Civil Defence Division	CIVIL DEFENCE	**N'f'ld.:**—Dept. of Provincial Affairs **P.E.I., Man.:**—Office of the Premier **N.S., N.B., Alta.:**—Depts. of Municipal Affairs **Que.:**—Dept. of Social Welfare and Youth **Ont., B.C.:**—Depts. of Provincial Secretary **Sask.:**—Dept. of Social Welfare, Director of Civil Defence
Dept. of Transport Meteorological Division, Toronto National Research Council Division of Building Research Climatological Atlas of Canada	CLIMATE	**Que.:**—Dept. of Lands and Forests Meteorological Bureau Dept. of Trade and Commerce Bureau of Statistics **B.C.:**—Dept. of Agriculture
Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch Dominion Coal Board Dominion Bureau of Statistics National Film Board (films, filmstrips, photographs)	COAL	**N.S., Que., Ont., B.C.:**—Depts. of Mines **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Mines Branch **Sask.:**—Dept. of Mineral Resources **Alta.:**—Dept. of Mines and Minerals
Dept. of Justice Director of Investigation and Research Restrictive Trade Practices Commission	COMBINES	
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (wireless communication in the Yukon and Northwest Territories) National Parks Branch (telephones in National Parks) Board of Transport Commissioners (regulation of certain telegraph and telephone companies) Dept. of Transport Telecommunication Division—radio communications; aviation radio and marine radio; Government telegraph and telephone services (telegraph and telephone services in remote areas) Canadian Overseas Telecommunication Corporation Canadian Broadcasting Corporation (network broadcasting, television, and international shortwave service) Dominion Bureau of Statistics	COMMUNICATIONS *For* 'Post Office' *and* 'Mail' *See* "Post Office"	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Tourist and Information Bureau **N.B.:**—N.B. Travel Bureau **Que.:**—Public Service Board Transportation Board **Ont.:**—Municipal Board and Bureau of Statistics and Research **Man.:**—Manitoba Telephone System **Sask.:**—Dept. of Telephones Saskatchewan Government Telephones **Alta.:**—Dept. of Railways and Telephones **B.C.:**—Dept. of Railways RCMP Provincial Headquarters

Sources for Federal Data	Subject	Sources for Provincial Data
Central Mortgage and Housing Corporation Federal District Commission National Capital Planning Committee, Information Office (general information on the Plan for the National Capital of Canada) National Film Board (films, photographs)	COMMUNITY PLANNING	**N'f'ld.:**—Dept. of Municipal Affairs and Supply **P.E.I.:**—Dept. of Industry and Natural Resources Dept. of Education, Physical Fitness Division **N.S.:**—Dept. of Municipal Affairs Dept. of Education, Physical Fitness Division **N.B.:**—Dept. of Education, Physical Education and Recreational Branch **Que., Sask.:**—Depts. of Municipal Affairs **Ont.:**—Dept. of Planning and Development, Community Planning Branch Dept. of Education, Community Programs Branch **Man.:**—Depts. of Municipal Commissioner and Mines and Natural Resources, Surveys Branch Dept. of Health and Public Welfare, Physical Fitness and Recreation Division **Sask.:**—Dept. of Municipal Affairs, Community Planning Branch Executive Council, Economic Advisory and Planning Board **Alta.:**—Dept. of Municipal Affairs, Town and Rural Planning Branch Dept. of Education, Health and Recreation Branch **B.C.:**—Dept. of Trade and Industry, Bureau of Economics and Statistics Dept. of Municipal Affairs Regional Planning Division Dept. of Education, Community Programs Branch
Dept. of Northern Affairs and National Resources National Parks Branch, Canadian Wildlife Service Northern Administration and Lands Branch Forestry Branch Federal District Commission Dept. of Agriculture Experimental Farms Service Economics Division Prairie Farm Rehabilitation Administration Maritime Marshlands Rehabilitation Administration Dept. of Fisheries Information and Educational Service National Film Board (films, photographs)	CONSERVATION	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., Alta.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Lands and Forests Dept. of Game and Fisheries Dept. of Hydraulic Resources **Ont.:**—Dept. of Lands and Forests Dept. of Planning and Development, Conservation Branch Ontario Agricultural College, Guelph **Man.:**—Dept. of Mines and Natural Resources **Sask.:**—Dept. of Natural Resources Dept. of Agriculture, Conservation and Development Branch **B.C.:**—Dept. of Lands and Forests, Director of Conservation
Privy Council Office Dept. of Secretary of State Dept. of Justice Public Archives	CONSTITUTION	**All Provinces except B.C.:**—Depts. of Attorney General **B.C.:**—Provincial Secretary
Dominion Bureau of Statistics	CONSUMER PRICE INDEX *See also* "Cost of Living"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Agriculture Economics Division Dept. of Fisheries Information and Educational Service Dept. of Insurance Central Mortgage and Housing Corporation (mortgage lending activities) Dept. of Secretary of State (for incorporation)	CO-OPERATIVES (including Credit Unions)	**N'f'ld.:**—Dept. of Fisheries and Co-operatives **P.E.I.:**—Dept. of Agriculture **N.S.:**—Dept. of Provincial Secretary **N.B.:**—Dept. of Agriculture **Que.:**—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Dept. of Agriculture Co-operation and Markets Branch **Man.:**—Dept. of Agriculture and Immigration, Co-operative Services Branch **Sask.:**—Dept. of Co-operation and Co-operative Development **Alta.:**—Dept. of Industries and Labour **B.C.:**—Attorney-General's Dept., Registrar of Companies
Dominion Bureau of Statistics	COST OF LIVING	**N'f'ld.:**—Dept. of Municipal Affairs and Supply **Alta.:**—Dept. of Industries and Labour Provincial Bureau of Statistics **B.C.:**—Dept. of Trade and Industry Bureau of Economics and Statistics
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch National Parks Branch National Museum of Canada Dept. of Citizenship and Immigration Indian Affairs Branch (Indian handicrafts) Dept. of Trade and Commerce Commodities Branch National Gallery of Canada (films, reference library) National Film Board (films, filmstrips, photographs) Dept. of Veterans Affairs (veterans only) Public Archives Dept. of National Health and Welfare Physical Fitness Division (theatre arts and handicrafts)	CREATIVE ARTS AND HANDICRAFTS	**N'f'ld.:**—Dept. of Education **P.E.I.:**—Tourist and Information Branch Dept. of Education, Physical Fitness Division **N.S.:**—Dept. of Trade and Industry, Handicrafts Division Nova Scotia College of Art Dept. of Education, Physical Fitness Division **N.B.:**—Dept. of Industry and Development, Handicraft Division The New Brunswick Museum, Saint John Dept. of Education, Physical Education and Recreation Branch **Que.:**—Dept. of Agriculture (rural handicrafts) **Ont.:**—Royal Ontario Museum Dept. of Education, Community Programs Branch **Man.:**—Dept. of Agriculture and Immigration (handicrafts) Dept. of Health and Public Welfare, Physical Fitness and Recreation Division **Sask.:**—Dept. of Education, Adult Education Division Fitness and Recreation Division Saskatchewan Arts Board **Alta.:**—Dept. of Economic Affairs (cultural activities) Dept. of Education, Health and Recreation Branch **B.C.:**—Provincial Museum (Indian handicrafts) Dept. of Education, Community Programs Branch

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Justice Clemency Branch The Penitentiary Commission Dept. of National Health and Welfare Research Division National Film Board (films, photographs) Dominion Bureau of Statistics	CRIME AND DELINQUENCY	**All Provinces:**—Depts. of Attorney General *Additional*— **N'f'ld., N.S., Alta.:**—Depts. of Public Welfare **P.E.I., B.C.:**—Depts. of Health and Welfare **Que.:**—Dept. of Social Welfare and Youth Dept. of Trade and Commerce Bureau of Statistics. **Ont.:**—Dept. of Reform Institutions **Man.:**—Dept. of Health and Public Welfare **Sask.:**—Dept. of Social Welfare
See pp. 98-105 of this volume for a list of Crown corporations giving in each case the Cabinet Minister through which that particular corporation reports to Parliament.	CROWN CORPORATIONS	For information with regard to individual Crown Corporations apply as follows: **N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Dept. of Industry and Natural Resources **Ont.:**—Dept. of Provincial Secretary **Man.:**—Treasury Dept. **Sask.:**—Government Finance Office **B.C.:**—Attorney-General's Dept.
Bank of Canada Dept. of Finance Royal Canadian Mint	CURRENCY	
	CUSTOMS AND EXCISE See "Taxation"	
Dept. of Agriculture Animal Husbandry Division Dairy Products Division Dairy Technology Research Unit National Film Board (films, photographs in co-operation with the Dept. of Agriculture) Dominion Bureau of Statistics	DAIRYING	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I., N.S.:**—Depts. of Agriculture **N.B., Ont., Alta., B.C.:**—Depts. of Agriculture, Dairy Branches (also Milk Control Board for Ont. and B.C.) **Que.:**—Dept. of Agriculture, Dairy Commission Dept. of Trade and Commerce Bureau of Statistics **Man.:**—Dept. of Agriculture and Immigration, Milk Control Board, Dairy Branch **Sask.:**—Dept. of Agriculture, Animal Industry Branch Milk Control Board
	DEATHS See "Vital Statistics"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of National Defence Director of Public Relations Directorates of Naval Information Public Relations (Army) Public Relations (RCAF) Public Relations (Defence Research Board) Dept. of Defence Production Canadian Commercial Corporation Defence Construction (1951) Limited Canadian Arsenals Limited Dept. of National Health and Welfare Civil Defence Division	DEFENCE *See also* "Civil Defence"	
Dept. of Defence Production	DEFENCE PRODUCTION	
Bank of Canada Dept. of Trade and Commerce Economics Branch Dept. of Labour Economics and Research Branch Legislation Branch Dept. of Mines and Technical Surveys Dept. of Northern Affairs and National Resources Administration Branch Engineering and Water Resources Branch Forestry Branch Northern Administration and Lands Branch (for Eskimos) Dept. of National Health and Welfare Research Division Dept. of Agriculture Economics Division Board of Transport Commissioners Bureau of Transportation Economics Dept. of Fisheries Fisheries Research Board of Canada Central Mortgage and Housing Corporation Dept. of Defence Production Economics and Statistics Branch Dominion Bureau of Statistics	ECONOMIC AND SOCIAL RESEARCH	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Dept. of Industry and Natural Resources **N.S.:**—Dept. of Trade and Industry, Nova Scotia Research Foundation **N.B.:**—Dept. of Industry and Development **Que.:**—Dept. of Trade and Commerce, Economic Research Bureau **Ont.:**—Bureau of Statistics and Research **Man.:**—Dept. of Industry and Commerce **Sask.:**—Executive Council, Economic and Advisory Planning Board Executive Council, Industrial Development Office Government Finance Office Dept. of Co-operation and Co-operative Development, Research and Statistical Division **Alta.:**—Director of Industrial Development and Economic Research Dept. of Economic Affairs **B.C.:**—Dept. of Trade and Industry Bureau of Economics and Statistics
Canadian Broadcasting Corporation (school broadcasts) Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (N.W.T.) Dept. of National Health and Welfare Dept. of Citizenship and Immigration Canadian Citizenship Branch Indian Affairs Branch Dept. of Veterans Affairs (veterans and children of war dead) Dept. of Labour Canadian Vocational Training Branch Dept. of Fisheries Information and Educational Service National Gallery of Canada (school broadcasts, lectures on art) Dominion Bureau of Statistics	EDUCATION *See also* "Motion Pictures" *and* "Photographic Material"	**All Provinces:**—Depts. of Education (technical, visual, audio and all other phases of education)

Sources for Federal Data	Subject	Sources for Provincial Data
Chief Electoral Office	ELECTIONS	**N'f'ld.:**—Dept. of Provincial Affairs **P.E.I., N.S.:**—Depts. of Provincial Secretary **N.B.:**—Dept. of Provincial Secretary-Treasurer **Que.:**—Chief Returning-Officer **Ont.:**—Provincial Secretary's Dept., Chief Election Officer **Man., B.C.:**—Chief Electoral Officers **Sask., Alta.:**—Clerks of the Executive Councils
Dept. of Northern Affairs and National Resources Engineering and Water Resources Branch Northwest Territories Power Commission National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics (central electric stations)	ELECTRIC POWER	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Public Utility Commission **N.S., Alta.:**—Power Commissions **N.B.:**—New Brunswick Electric Power Commission **Que.:**—Hydro-Electric Commission Dept. of Hydraulic Resources **Ont.:**—The Hydro-Electric Power Commission of Ontario **Man.:**—Manitoba Hydro Electric Board Dept. of Public Utilities **Sask.:**—Saskatchewan Power Corporation; Saskatchewan Power Commission **B.C.:**—Dept. of Lands and Forests British Columbia Power Commission
Dept. of Labour National Employment Service Economics and Research Branch Civil Service Commission (opportunities for, and conditions of, employment in the Federal Civil Service) Dominion Bureau of Statistics	EMPLOYMENT	**All Provinces:**—Depts. of Agriculture (farm labour) *Additional:*—**N'f'ld., N.S., Man., Sask.:**—Depts. of Labour **Que.:**—Dept. of Labour, Provincial Employment Bureau **Ont.:**—Dept. of Labour Bureau of Statistics and Research **Alta.:**—Dept. of Industries and Labour **B.C.:**—Dept. of Labour Bureau of Economics and Statistics
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (education, welfare, handicrafts, livelihood) Arctic Division (Eskimo problems) National Museum of Canada (historical and archæological information, handicrafts) Canadian Wildlife Service (wildlife in Canada's North) Dept. of National Health and Welfare (health and medical services) Royal Canadian Mounted Police (field duties)	ESKIMOS	**N'f'ld.:**—Dept. of Public Welfare, Division of Northern Labrador Affairs
Dept. of Trade and Commerce Canadian Government Exhibition Commission Dept. of Agriculture Information Service National Film Board (films, photographs) National Gallery of Canada (paintings, reproductions, etc.) Dept. of Northern Affairs and National Resources Canadian Government Travel Bureau (sportsmen's shows) Dept. of Fisheries Information and Educational Service	EXHIBITIONS	**N'f'ld.:**—Dept. of Economic Development **N.B., Sask.:**—Dept. of Agriculture **Que.:**—Dept. of Agriculture Dept. of Trade and Commerce **Ont.:**—Most Ontario Departments organize exhibitions **Man.:**—Dept. of Agriculture and Immigration, Extension Service Dept. of Industry and Commerce **Alta.:**—Dept. of Economic Affairs **B.C.:**—Depts. of Agriculture, Trade and Industry

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Explosives Division	EXPLOSIVES	**B.C.:**—Dept. of Mines
Dept. of External Affairs Information Division Press Office	EXTERNAL AFFAIRS	
Dept. of National Health and Welfare Family Allowances Division	FAMILY ALLOWANCES	
Dept. of Agriculture Field Husbandry Division Forage Crops Division Plant Products Division National Film Board (films, photographs) Dominion Bureau of Statistics	FIELD CROPS	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I., N.S., N.B.:**—Depts. of Agriculture **Que.:**—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Dept. of Agriculture, Crops, Seeds and Weeds Branch **Man.:**—Dept. of Agriculture and Immigration **Sask.:**—Dept. of Agriculture, Plant Industry Branch **Alta., B.C.:**—Depts. of Agriculture, Field Crop Branches
Dept. of Finance Bank of Canada Dominion Bureau of Statistics	FINANCE See *also* "Taxation"	**N'f'ld., B.C.:**—Depts. of Finance **P.E.I., Sask.:**—Provincial Treasurer **N.S.:**—Dept. of Provincial Treasurer **N.B.:**—Dept. of Provincial Secretary-Treasurer **Que.:**—Dept. of Finance Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Provincial Treasurer's Dept. **Man., Alta.:**—Provincial Treasury Depts.
Dept. of Public Works Fire Prevention Branch (fire loss statistics) Dept. of Northern Affairs and National Resources Forestry Branch Board of Transport Commissioners (forest-fire protection along railway lines) National Film Board (films, photographs, in relation to government prevention and conservation programs) National Research Council Division of Building Research, Fire Research Section	FIRE PREVENTION	**All Provinces:**—Provincial Fire Marshals (for urban and rural fire losses) *Additional:* — **N'f'ld.:** — Dept. of Mines and Resources **N.S., Alta., B.C.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Lands and Forests Forest Protection Service Dept. of Public Works, Fire Commissioner **Ont.:**—Dept. of Lands and Forests, Forest Protection Division **Man.:**—Dept. of Mines and Natural Resources Dept. of Labour, Fire Commissioner **Sask.:**—Dept. of Natural Resources Dept. of Labour, Fire Commissioner

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Fisheries Information and Educational Service Fisheries Research Board of Canada Dept. of Trade and Commerce Agriculture and Fisheries Branch National Film Board (films, photographs) Dominion Bureau of Statistics	FISHERIES	**N'f'ld.:**—Dept. of Fisheries and Co-operatives **P.E.I.:**—Dept. of Industry and Natural Resources **N.S.:**—Dept. of Trade and Industry Fisheries Division **N.B.:**—Dept. of Industry and Development, Fisheries Branch **Que.:**—Dept. of Game and Fisheries Dept. of Trade and Commerce, Bureau of Statistics **Ont.:**—Dept. of Lands and Forests Fish and Wildlife Division **Man.:**—Dept. of Mines and Natural Resources, Game and Fisheries Branch **Sask.:**—Dept. of Natural Resources, Fisheries Branch Saskatchewan Marketing Service **Alta.:**—Dept. of Lands and Forests, Fish and Game Branch **B.C.:**—Dept. of Fisheries Provincial Game Commission
	FOOD AND DRUGS *See* "Standards" *and* "Nutrition"	
Bank of Canada	FOREIGN EXCHANGE	
Dept. of Northern Affairs and National Resources Forestry Branch National Film Board (films, filmstrips, photographs) Dept. of Agriculture Forest Biology Division Dominion Bureau of Statistics	FOREST RESOURCES	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., Que., Ont., Alta., B.C.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Forestry Branch **Sask.:**—Dept. of Natural Resources, Forestry Branch
	FRUIT *See* "Horticulture"	
	FUEL *See* "Coal", "Oil", "Forest Resources"	
Dept. of Agriculture Marketing Service (fur grading) Experimental Farms Service (ranch fur production) National Film Board (photographs) Dominion Bureau of Statistics (general fur products statistics)	FUR FARMING *See also* "Trapping"	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I., N.B., Alta., B.C.:**—Depts. of Agriculture **N.S., Ont.:**—Depts. of Lands and Forests **Que.:**—Dept. of Agriculture Dept. of Trade and Commerce Bureau of Statistics **Man.:**—Dept. of Mines and Natural Resources, Game and Fisheries Branch **Sask.:**—Dept. of Natural Resources Saskatchewan Marketing Service

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Mines and Technical Surveys Geographical Branch Canadian Board on Geographical Names Dept. of Agriculture Field Husbandry Division (soil surveys) Public Archives Dept. of Fisheries Fisheries Research Board (oceanography)	GEOGRAPHY	**N'f'ld.:**—Dept. of Mines and Resources **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources **Sask.:**—Dept. of Natural Resources Bureau of Publications **B.C.:**—Dept. of Lands and Forests
Dept. of Mines and Technical Surveys Geological Survey of Canada	GEOLOGY	**N'f'ld.:**—Dept. of Mines and Resources **N.S., B.C.:**—Depts. of Mines **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Mines Geological Surveys Branch **Ont.:**—Dept. of Mines Geological Branch **Man.:**—Dept of Mines and Natural Resources, Mines Branch **Sask.:**—Dept. of Mineral Resources **Alta.:**—Dept. of Mines and Minerals
Dept. of Secretary of State (Federal-Provincial channel of communication) Chief Electoral Office (Electoral Act and Voters Lists) Clerk of the Privy Council (appointments, orders in council, statutory orders and regulations) Dept. of Citizenship and Immigration Canadian Citizenship Branch Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories)	GOVERNMENT *For* 'Senate of Canada', 'House of Commons' *and* 'Library of Parliament' See "Parliament"	**N'f'ld.:**—Dept. of Provincial Affairs **P.E.I., N.S., Ont., Man., Sask., Alta., B.C.:**—Depts. of Provincial Secretary **N.B.:**—Dept. of Provincial Secretary-Treasurer **Que.:**—Office of Provincial Secretary
Dept. of National Health and Welfare Health Branch Dept. of Northern Affairs and National Resources (for N.W.T.) Dominion Bureau of Statistics (hospital statistics) National Film Board (films, filmstrips, photographs)	HEALTH *For* 'Health of Veterans' See "Veterans Affairs"	**N'f'ld., Que., Ont.:**—Depts. of Health **P.E.I.:**—Dept. of Health and Welfare **N.S., Sask., Alta.:**—Depts. of Public Health **N.B.:**—Dept. of Health and Social Services **Man.:**—Dept. of Health and Public Welfare **B.C.:**—Dept. of Health and Welfare (general) Dept. of Provincial Secretary (mental hospitals) British Columbia Hospital Insurance Commission
	HIGHWAYS See "Transportation"	
Public Archives of Canada Dept. of Northern Affairs and National Resources National Parks Branch (historic sites and monuments) Dept. of National Defence Directorate of Public Relations (war histories, official war summaries, etc.) Dept. of Citizenship and Immigration Canadian Citizenship Branch Dominion Bureau of Statistics	HISTORY	**N'f'ld.:**—Legislative Library Gosling Memorial Library **N.S.:**—Public Archives **N.B.:**—Legislative Library **Que.:**—The Archives **Ont.:**—Legislative Library Bureau of Statistics and Research Provincial Archivist **Man.:**—Provincial Library and Archives **Sask.:**—Legislative Library, Archives Division **Alta.:**—Archives, Provincial Library **B.C.:**—Dept. of Education Provincial Archivist

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Agriculture Marketing Service, Fruit and Vegetable Division Experimental Farms Service, Horticulture Division Dominion Bureau of Statistics	HORTICULTURE	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Agriculture **N.S., N.B., Alta., B.C.:**—Depts. of Agriculture, Horticultural Branches **Que.:**—Dept. of Agriculture, Fruit Branch **Ont.:**—Dept. of Agriculture, Agriculture and Horticulture Branches **Man.:**—Dept. of Agriculture and Immigration **Sask.:**—Dept. of Agriculture, Plant Industry Branch
	HOUSE OF COMMONS *See* "Parliament"	
	HOUSING *See* "Building Construction"	
Dept. of Citizenship and Immigration Immigration Branch Dept. of Labour Special Services Branch Dept. of National Health and Welfare Quarantine, Immigration Medical and Sick Mariners Division National Film Board (films, photographs) Dominion Bureau of Statistics	IMMIGRATION	**P.E.I.:**—Dept. of Industry and Natural Resources **Ont.:**—Dept. of Planning and Development Bureau of Statistics and Research **Man.:**—Dept. of Agriculture and Immigration **Sask.:**—Dept. of Social Welfare **Alta.:**—Dept. of Economic Affairs
	INCOME TAX *See* "Taxation"	
Dept. of Citizenship and Immigration Indian Affairs Branch Dept. of Northern Affairs and National Resources National Museum of Canada (historical and archæological information) Dept. of National Health and Welfare (health services)	INDIANS	**N'f'ld.:**—Dept. of Public Welfare (Indians in Labrador) **Que.:**—Dept. of Fish and Game (fur preserves) **B.C.:**—Dept. of Labour, Provincial Advisory Committee on Indian Affairs
	INDUSTRIAL DEVELOPMENT *See* "Manufacturing"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Insurance (Dominion, British and foreign companies. Federal Civil Service insurance) Dept. of Labour Annuities Branch Dept. of Veterans Affairs Veterans Insurance Branch Dept. of Trade and Commerce Export Credits Insurance Corporation Central Mortgage and Housing Corporation (insures loans made under National Housing Act 1954 and other appropriate circumstances) Dominion Bureau of Statistics (summary statistics of all types of insurance)	INSURANCE—LIFE, FIRE, ETC. *For* 'Unemployment Insurance' *See* "Labour"	**N'f'ld.:**—Dept. of Finance **P.E.I., N.S., N.B., Man., Alta., B.C.:**—Superintendents of Insurance **Que.:**—Finance Dept., Insurance Branch **Ont.:**—Dept. of Insurance **Sask.:**—Superintendent of Insurance, Government Insurance Office
Dept. of Mines and Technical Surveys Dept. of Trade and Commerce Commodities Branch National Film Board (films, photographs) Dominion Bureau of Statistics	IRON AND STEEL	**N'f'ld.:**—Dept. of Mines and Resources **N.S.:**—Dept. of Mines Research Foundation **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Trade and Commerce, Bureau of Statistics **Ont.:**—Dept. of Planning and Development, Trade and Industry Branch Bureau of Statistics and Research **Man.:**—Dept. of Industry and Commerce **Sask.:**—Dept. of Mineral Resources **B.C.:**—Dept. of Mines Bureau of Economics and Statistics
Dept. of Justice Dominion Bureau of Statistics	JUSTICE	**All Provinces:**—Depts. of Attorney General
Dept. of Labour Information Branch Government Annuities Branch Legislation Branch Unemployment Insurance Commission Economics and Research Branch Canada Labour Relations Board Canadian Vocational Training Branch Civilian Rehabilitation Branch Industrial Relations Branch (conciliation of labour disputes, payment of fair wages on government contracts, promotion of labour-management production committees, fair employment practices) International Labour Organization Branch National Employment Service National Advisory Council on Manpower Special Services Branch Women's Branch Dept. of Secretary of State (registration of trade unions) National Film Board (films, photographs) Dominion Bureau of Statistics	LABOUR *See also* "Workmen's Compensation"	**N'f'ld., N.S., N.B., Man., Sask.:**—Depts. of Labour **Que., Ont., B.C.:**—Depts. of Labour Provincial Bureaus of Statistics **Alta.:**—Dept. of Industries and Labour Provincial Bureau of Statistics

Sources for Federal Data	**Subject**	**Sources for Provincial Data**
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (Yukon and Northwest Territories) Dept. of Mines and Technical Surveys Surveyor General of Canada Dept. of Veterans Affairs Dept. of Citizenship and Immigration Immigration Branch (for land settlement) Dept. of Transport Lands Branch	LANDS AND LAND SETTLEMENT	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Commissioner of Public Lands **N.S.:**—Dept. of Agriculture, Land Settlement Board **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept of Lands and Forests Dept. of Colonization **Ont., Alta.:**—Depts. of Lands and Forests **Man.:**—Dept. of Mines and Natural Resources, Lands Branch **Sask.:**—Dept. of Agriculture, Lands Branch; Attorney General, Land Titles **B.C.:**—Dept. of Agriculture, Land Clearing; Dept. of Lands and Forests
Royal Canadian Mounted Police (*Enforces Federal Statutes in all parts of Canada; also carries out, on behalf of Attorneys General and under contract, enforcement of the Criminal Code and Provincial Statutes in all provinces except Quebec and Ontario; is the only law-enforcement body in the Yukon and Northwest Territories and assists in the welfare of Eskimos and Indians in these territories. The Minister in control of the Force is the Minister of Justice.*)	LAW ENFORCEMENT	**All Provinces:**—Depts. of the Attorney General
Clerk of the Senate of Canada Clerk of the House of Commons Dept. of Justice Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories) For Acts administered by individual Federal Depts., *see* pp. 105-109 of this volume.	LEGISLATION *For* 'Statutory Orders *and* Regulations' *See* "Government"	**All Provinces except Man. and B.C.:**—Depts. of Attorney General **Man.:**—Legislative Counsel **B.C.:**—Dept. of Provincial Secretary
	LIBRARIES *See* "Bibliography: Books"	
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (Yukon and Northwest Territories) Dept. of Secretary of State (administration of Canada Temperance Act) Dominion Bureau of Statistics (statistical report covering Canada)	LIQUOR CONTROL	**N'f'ld.:**—Dept. of Finance **P.E.I.:**—Temperance Commission **N.S., Que.:**—Liquor Commissions **N.B., Ont., Alta., B.C.:**—Liquor Control Boards **Man.:**—Liquor Control Commission **Sask.:**—Liquor Board
Dept. of Agriculture Livestock Marketing Division (for marketing data) Live-stock and Poultry Division (for breeding programs and testing data) Health of Animals Division (for administration of disease control regulations, meat inspection, etc.) Animal Husbandry Division (for general information) Animal Pathology Division (research in animal diseases) Dept. of Trade and Commerce Agriculture and Fisheries Branch National Film Board (films, photographs, in relation to Dept. of Agriculture) Dominion Bureau of Statistics	LIVE STOCK	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I., N.B., Ont.:**—Depts. of Agriculture, Live-stock Branches **N.S.:**—Dept. of Agriculture, Animal Husbandry Branch **Que.:**—Dept. of Agriculture, Animal Husbandry Branch Provincial Bureau of Statistics **Man.:**—Dept. of Agriculture and Immigration, Live Stock Branch **Sask.:**—Dept. of Agriculture, Animal Industry Branch **Alta., B.C.:**—Provincial Bureaus of Statistics Depts. of Agriculture, Livestock Branches

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Northern Affairs and National Resources Forestry Branch Dept. of Trade and Commerce Commodities Branch National Film Board (films, filmstrips, photographs, in relation to departmental conservation and development programs) Dominion Bureau of Statistics	LUMBERING	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., Que., Ont., Alta.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Forestry Branch **Sask.:**—Dept. of Natural Resources, Forestry Branch Industrial Development Office Saskatchewan Timber Board **B.C.:**—Dept of Lands and Forests Dept. of Trade and Industry Bureau of Economics and Statistics
Dept. of Secretary of State (for incorporation of companies and Companies Act) Dept. of Trade and Commerce Commodities Branch Industrial Development Branch Dept. of Defence Production (for defence items) Bank of Canada Industrial Development Bank National Research Council Canadian Patents and Development Limited (utilization of new scientific processes) National Film Board (films, filmstrips and photographs) National Gallery of Canada (for industrial designs) Dominion Bureau of Statistics	MANUFACTURING *See also* "Crown Corporations"	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., B.C.:**—Depts. of Trade and Industry **N.B.:**—Dept. of Industry and Development **Que.:**—Dept. of Trade and Commerce, Bureau of Statistics **Ont.:**—Dept. of Planning and Development, Trade and Industry Branch Bureau of Statistics **Man.:**—Dept. of Industry and Commerce **Sask.:**—Executive Council, Economic Advisory and Planning Board Executive Council, Industrial Development Office Government Finance Office **Alta.:**—Dept. of Economic Affairs Bureau of Statistics **B.C.:**—Bureau of Statistics
Dept. of Mines and Technical Surveys Geographical Branch Geological Survey of Canada, Surveys and Mapping Branch (geological, topographical and general maps; aeronautical and marine navigation charts) Dept. of Agriculture (soil survey and economic survey maps) Public Archives (maps relating to history and cartography) Dept. of Fisheries Information and Educational Service (fisheries maps) Dept. of Transport (meteorological maps) National Research Council Division of Building Research Climatological Atlas of Canada Dominion Bureau of Statistics (economic and census maps)	MAPS AND CHARTS	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Public Works and Highways **N.S.:**—Dept. of Mines, Research Foundation **N.B.:**—Dept. of Lands and Mines **Que., Alta., B.C.:**—Depts. of Lands and Forests **Ont.:**—Dept. of Lands and Forests Dept. of Mines **Man.:**—Dept. of Mines and Natural Resources, Surveys Branch **Sask.:**—Dept. of Natural Resources Bureau of Publications (Federal Dept. of Mines and Technical Surveys, Geographical Branch)
	MARRIAGES *See* "Vital Statistics"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Agriculture Economics Division (Co-operatives) Dominion Bureau of Statistics	MERCHANDISING	**Man.:**—Dept. of Industry and Commerce **Sask.:**—Executive Council, Industrial Development Office **Alta.:**—Dept. of Industries and Labour **B.C.:**—Dept. of Trade and Industry Bureau of Economics and Statistics
Dept. of Mines and Technical Surveys Mines Branch Geological Survey Dept. of Trade and Commerce Commodities Branch Dominion Bureau of Statistics (for production data)	METALS (*other than* Iron *and* Steel)	**N'f'ld.:**—Dept. of Mines and Resources **N.S., Que., Ont.:**—Depts. of Mines **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Mines Branch **Sask.:**—Dept. of Mineral Resources **Alta.:**—Dept. of Mines and Minerals **B.C.:**—Bureau of Economics and Statistics Dept. of Mines
	METEOROLOGY See "Weather"	
Dept. of Mines and Technical Surveys Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories) Dominion Bureau of Statistics (for production data)	MINING AND MINERALS	**N'f'ld.:**—Dept. of Mines and Resources **N.S., Que., Ont., B.C.:**—Depts. of Mines **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Mines Branch **Sask.:**—Dept. of Mineral Resources **Alta.:**—Dept. of Mines and Minerals
National Film Board (*Produces documentary films, newsreels and short subjects for theatrical, non-theatrical and television distribution: film-strips and photographs for informational, educational and archival purposes and other visual materials devoted to the interpretation of the Canadian scene to audiences both at home and abroad; and maintains a large film preview library for the benefit of government departments and other official bodies.*) Dept. of National Health and Welfare Information Services Division Physical Fitness Division National Gallery of Canada (*maintains a library of films on art.*)	MOTION PICTURES	**N.S., Que., Alta.** and **B.C.** produce educational or informational films **N'f'ld., P.E.I., N.B., Ont.** and **Man.** buy such films but do not produce them **Sask.:**—Bureau of Publications Dept. of Education, Visual Education Branch Dept. of Labour (film censor) **Alta.:**—Dept. of Economic Affairs, Photographic Branch **B.C.:**—Dept. of Trade and Industry Photographic Branch *All provinces have Motion Picture Censorship Boards. Details may be obtained by application to the province concerned: Depts. of Education and Travel, Provincial Censorship Boards and Regional National Film Board Offices.*
Dominion Bureau of Statistics Public Finance and Transportation Division	MUNICIPAL AFFAIRS	**N'f'ld.:**—Dept. of Municipal Affairs and Supply **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., N.B., Que., Ont., Sask., Alta., B.C.:**—Depts. of Municipal Affairs **Man.:**—Dept. of Municipal Commissioner

Sources for Federal Data	Subject	Sources for Provincial Data
National Gallery of Canada (paintings, sculpture, etc.) Public Archives (and Canadian War Museum) Dept. of Northern Affairs and National Resources National Parks Branch National Museum of Canada Historic Parks Museums	MUSEUMS	Not including provincial universities in Sask., Alta. and B.C. **N'f'ld.:**—Dept. of Provincial Affairs **N.S.:**—Nova Scotia Museum of Fine Arts, Public Archives of Nova Scotia, Provincial Museum of Nova Scotia, Halifax **N.B.:**—New Brunswick Museum, Saint John **Que.:**—The Archives, Musée de la Province de Québec, Quebec; Commercial and Industrial Museum of Montreal **Ont.:**—Royal Ontario Museum (including Archæology, Geology, Mineralogy, Palæontology and Zoology): Ontario Archives, Toronto **Man.:**—Manitoba Museum, Winnipeg **Sask.:**—Dept. of Natural Resources, Provincial Museum **B.C.:**—Provincial Museum of Natural History and Anthropology, Provincial Archives (including Helmcken House), Victoria
Dominion Bureau of Statistics	NATIONAL ACCOUNTS	
Dept. of Citizenship and Immigration Canadian Citizenship Registration Branch	NATURALIZATION See *also* "Population"	
Dept. of Public Works (construction and operation of graving docks), Harbours and Rivers Branch, Chief Engineer and Information Services Dept. of Transport Marine and Canal Services (aids to marine navigation) Telecommunication Division (radio aids to navigation) National Research Council Division of Radio and Electrical Engineering (applications of radar to navigation) Dept. of Mines and Technical Surveys Hydrographic Service National Harbours Board Canadian Maritime Commission	NAVIGATION	
Dept. of National Health and Welfare Nutrition Division Dept. of Agriculture Dept. of Fisheries Inspection and Consumer Services	NUTRITION	**N'f'ld., Que., Ont.:**—Depts. of Health **P.E.I., B.C.:**—Depts. of Health and Welfare **N.S., Alta.:**—Depts. of Public Health **N.B.:**—Dept. of Health and Social Services **Man.:**—Dept. of Health and Public Welfare **Sask.:**—Dept. of Public Health, Nutrition Division
	OCCUPATIONAL INFORMATION See "Employment"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Northern Affairs and National Resources (for Yukon and Northwest Territories) Dept. of Mines and Technical Surveys Geological Survey of Canada Mines Branch National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics	OIL	**N'f'ld.:**—Dept. of Mines and Resources **N.S., Ont., B.C.:**—Depts. of Mines **N.B.:**—Dept. of Lands and Mines **Man.:**—Dept. of Mines and Natural Resources, Mines Branch **Sask.:**—Dept. of Mineral Resources **Alta.:**—Dept. of Mines and Minerals
Dept. of National Health and Welfare Old Age Assistance Division Dept. of Northern Affairs and National Resources Director of Old Age Assistance (Northwest Territories) Director of Old Age Assistance and Blind Persons Allowances (Yukon Territory)	OLD AGE ASSISTANCE	**N'f'ld., N.S.:**—The Old Age Assistance Board **P.E.I., Ont.:**—Director of Old Age Assistance **N.B.:**—The Old Age and Blind Assistance Board **Que.:**—Quebec Social Allowances Commission **Man.:**—The Old Age Assistance and Blind Persons' Allowances Board **Sask.:**—Dept. of Social Welfare, Public Assistance Division **Alta.:**—The Pensions Board **B.C.:**—Old-Age Assistance Board
Dept. of National Health and Welfare Old Age Security Division	OLD AGE SECURITY PENSIONS	
Dept. of Northern Affairs and National Resources National Parks Branch National Film Board (films, photographs) Federal District Commission	PARKS	**N.S., Ont., Alta., B.C.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Game and Fisheries **Man.:**—Dept. of Mines and Natural Resources, Forestry Branch **Sask.:**—Dept. of Provincial Secretary, Parks Branch
Senate of Canada House of Commons Library of Parliament	PARLIAMENT	**N'f'ld.:**—Dept. of Provincial Affairs **P.E.I., N.B., Man., Sask., Alta., B.C.:**—Legislative Assemblies **N.S., Ont.:**—Houses of Assembly **Que.:**—Legislative Council Legislative Assembly
Dept. of Secretary of State Canadian Patents and Development Limited National Library (handles all copyright books)	PATENTS, COPYRIGHTS AND TRADE MARKS	
Dept. of Mines and Technical Surveys The National Air Photographic Library National Film Board Public Archives (historical)	PHOTOGRAPHIC MATERIAL *See also* "Motion Pictures" *and* "Tourist Trade"	*Photographs are available from many provincial government departments in all provinces. See under "Motion Pictures".*

Sources for Federal Data	Subject	Sources for Provincial Data
Dominion Bureau of Statistics (for all census population statistics) Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (for Eskimos) Dept. of Citizenship and Immigration Canadian Citizenship Branch Citizenship Registration Branch Indian Affairs Branch (for Indians) Public Archives (early census and settlement records)	POPULATION	**N'f'ld.:**—Dept. of Health **N.B.:**—Dept. of Health and Social Services, Vital Statistics Branch **Que.:**—Dept. of Health, Vital Statistics Branch Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Bureau of Statistics and Research **Man.:**—Dept. of Industry and Commerce **Sask.:**—Dept. of Public Health, Vital Statistics Branch Dept. of Municipal Affairs **Alta.:**—Dept. of Industries and Labour, Provincial Statistician **B.C.:**—Dept. of Health and Welfare Vital Statistics Dept. of Trade and Industry Bureau of Economics and Statistics
Post Office Department Administration Branch (general postal information, postage rates, both domestic and foreign, etc.) Transportation Branch (air, land and railway mail services) Financial Branch (information regarding money orders, savings bank, philatelic services, etc.) Operations Branch (information regarding postal service to the public and hours of service) Personnel Branch (personnel, training, employee services)	POST OFFICE	
Dept. of Agriculture Poultry Research Division, Experimental Farms Service (for general information) Poultry Marketing Division (marketing information) Live-stock and Poultry Division (breeding programs, hatchery regulations, etc.) Animal Pathology Division (for poultry diseases) National Film Board (films and photographs) Dominion Bureau of Statistics	POULTRY	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I., N.S.:**—Depts. of Agriculture **N.B., Alta., B.C.:**—Depts. of Agriculture, Poultry Branches **Que.:**—Dept. of Agriculture, Poultry Division Dept. of Trade and Commerce Bureau of Statistics **Ont.:**—Ontario Agricultural College (Guelph), Poultry Division **Man.:**—Dept. of Agriculture and Immigration **Sask.:**—Dept. of Agriculture, Animal Industry Branch
	POWER See "Electric Power"	
Dept. of Agriculture Marketing Service (prices of farm products) Agricultural Prices Support Board Dept. of Fisheries Fisheries Prices Support Board Dominion Bureau of Statistics	PRICES	**Man.:**—Dept. of Industry and Commerce **Sask.:**—Executive Council, Economic Advisory and Planning Board **B.C.:**—Bureau of Economics and Statistics

Sources for Federal Data	Subject	Sources for Provincial Data
	PUBLIC HEALTH See "Health"	
Dominion Bureau of Statistics	PUBLIC UTILITIES *See also* "Electric Power"	**N'f'ld., P.E.I.:**—Public Utilities Boards **N.S., N.B.:**—Boards of Commissioners of Public Utilities **Que.:**—Public Service Board **Ont.:**—Ontario Municipal Board **Man.:**—Dept. of Public Utilities **Sask.:**—Government Finance Office Saskatchewan Government Telephones Saskatchewan Power Corporation **Alta.:**—Board of Public Utilities Commissioners Natural Gas Utilities Board **B.C.:** — Public Utilities Commission
	PUBLIC WELFARE See "Welfare"	
Dept. of Labour Industrial Relations Branch (fair wages) Dept. of Public Works Information Services Dept. of Transport Marine, Canal and Air Services St. Lawrence Seaway Authority (St. Lawrence Seaway and Power Project)	PUBLIC WORKS	**All Provinces except N.S.:**—Depts. of Public Works **N.S.:**—Dept. of Highways and Public Works **Ont.:**—The Hydro-Electric Power Commission of Ontario (St. Lawrence Power Project)
Dept. of Transport Telecommunications Division (all matters affecting licences and facilities) Canadian Broadcasting Corporation (national broadcasting in Canada, including radio and television, regulations for control of programs, international short-wave service) National Research Council Division of Radio and Electrical Engineering (radio science and its application to industry)	RADIO	
	RAILWAYS See "Transportation"	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Northern Affairs and National Resources Engineering and Water Resources Branch Central Mortgage and Housing Corporation	RECONSTRUCTION AND DEVELOPMENT	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Dept. of Industry and Natural Resources **N.S.:**—Depts. of Agriculture and Marketing, and Trade and Industry **N.B.:**—Dept. of Industry and Development **Que.:**—Depts. of Lands and Forests, Labour, Roads, Trade and Commerce, Social Welfare and Youth **Ont.:**—Dept. of Planning and Development **Man.:**—Dept. of Industry and Commerce **Sask.:**—Dept. of Social Welfare, Rehabilitation Division **B.C.:**—Dept. of Trade and Industry Bureau of Economics and Statistics Dept. of Finance, Public Housing
Dept. of Northern Affairs and National Resources National Parks Branch Canadian Government Travel Bureau Northern Administration and Lands Branch (for N.W.T.) National Film Board (films, filmstrips, photographs, in connection with the Dept. of National Health and Welfare) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indians)	RECREATION *See also* "Health"	**P.E.I., N.S., N.B., Ont., Sask., Alta., B.C.:**—Depts. of Education **Man.:**—Dept. of Health and Public Welfare
Dept. of Veterans Affairs Dept. of Labour Civilian Rehabilitation Branch Dept. of National Health and Welfare	REHABILITATION	**P.E.I.:**—Dept. of Education (Co-ordinator, Rehabilitation Branch) **N.S.:**—Dept. of Public Health (Provincial Rehabilitation Co-ordinator) **N.B.:**—Dept. of Health and Social Services (Provincial Co-ordinator of Rehabilitation) **Man.:**—Dept. of Health and Public Welfare (Provincial Co-ordinator of Rehabilitation Services) **Sask.:**—Dept. of Social Welfare, Rehabilitation Division **Alta.:**—Dept. of Public Welfare (Co-ordinator of Rehabilitation of Disabled Persons) **B.C.:**—Dept. of Health and Welfare (Rehabilitation Co-ordinator)
	RESEARCH *See* "Economic and Social Research" *and* "Scientific Research"	

Sources for Federal Data	Subject	Sources for Provincial Data
National Research Council Laboratory Divisions (for investigations in applied biology, building research, pure and applied chemistry, mechanical engineering, including aeronautics and hydraulics, pure and applied physics, radio and electrical engineering) Division of Medical Research (Scholarships and grants-in-aid for graduate research in the universities) *Inquiries for general research information should be addressed to the Technical Information Service.* Dept. of Mines and Technical Surveys Dept. of Northern Affairs and National Resources Forestry Branch National Parks Branch, Canadian Wildlife Services, National Museum of Canada Dept. of Agriculture Science Service (for research in animal and plant pathology, bacteriology, chemistry, entomology, etc.) Experimental Farms Service (for research in agricultural engineering, crop production, breeding and genetics, plant and animal nutrition, etc.) Dept. of Transport (aviation, radio, meteorology, navigation) Dept. of National Defence Defence Research Board, Directorate of Public Relations Dept. of Fisheries Fisheries Research Board of Canada Dept. of National Health and Welfare	SCIENTIFIC RESEARCH	**N'f'ld.:**—Dept. of Economic Development **N.S.:**—Nova Scotia Research Foundation **N.B.:**—Dept. of Industry and Development, Research and Development Division **Que.:**—Dept. of Trade and Commerce. Scientific Research Bureau **Ont.:**—Research Council of Ontario Ontario Research Foundation **Man.:**—Various Depts., such as Health and Welfare, Mines and Natural Resources, Agriculture and Immigration, Industry and Commerce **Sask.:**—Saskatchewan Research Council **Alta.:**—Alberta Research Council **B.C.:**—Dept. of Trade and Industry Research Council
	SENATE See "Parliament"	
	SOCIAL SECURITY See "Family Allowances" "Blindness Allowances" "Old Age Assistance" "Old Age Security" "Workmen's Compensation" "Labour" "Unemployment" "Veterans Affairs" "Economic and Social Research"	

Sources for Federal Data	Subject	Sources for Provincial Data
	SOCIAL WELFARE *See* "Welfare"	
Dept. of Trade and Commerce Standards Branch (for inquiries on electricity and gas inspection, weights and measures, precious metals marking, commodity standards and national trade mark matters) Dept. of National Health and Welfare (for standards and method of control of quality or potency of food and drugs) Dept. of Agriculture (for inquiries on standards for meat and canned food, fruit, honey, maple products, vegetables, dairy products, poultry, etc.) Dept. of Transport (standards in radio frequencies, standards in steamship inspection) National Research Council Applied Physics Branch (fundamental physical and electrical standards) Division of Building Research, Specifications Section Dept. of Fisheries (standards of fish products) Canadian Government Specifications Board (specifications for purchasing)* Canadian Standards Association Central Mortgage and Housing Corporation	STANDARDS AND SPECIFICATIONS	
	STEAMSHIPS *See* "Transportation"	
	SUCCESSION DUTIES *See* "Taxation"	
Dept. of National Revenue Taxation Division (Income Tax and Succession Duties statistics and information) Customs and Excise Division (Customs, Excise and Sales Tax statistics and information) Dept. of Finance (Budget papers reviewing taxation policy, changes in rates, revenue forecasts)	TAXATION	**N'f'ld., Que.:**—Depts. of Finance **P.E.I.:**—Provincial Treasurer **N.S.:**—Dept. of Provincial Secretary **N.B.:**—Dept. of Provincial Secretary-Treasurer **Ont.:**—Provincial Treasurer's Dept. **Man., Sask.:**—Provincial Treasury Depts. **Alta.:**—Provincial Treasurer's Dept. Provincial Secretary **B.C.:**—Dept. of Finance, Surveyor of Taxes
	TELEGRAPHS AND TELEPHONES *See* "Communications"	

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* *See* Appendix.

Sources for Federal Data	Subject	Sources for Provincial Data
Canadian Broadcasting Corporation Dept. of Transport Telecommunications Division National Research Council	TELEVISION See *also* "Radio"	
Dept. of Mines and Technical Surveys Surveys and Mapping Branch National Research Council Applied Physics Branch (photogrammetric research)	TOPOGRAPHY	**N'f'ld.:**—Dept. of Mines and Resources **N.S.:**—Dept. of Mines, Nova Scotia Research Foundation **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Lands and Forests Dept. of Trade and Commerce Cartography Service **Ont.:**—Dept. of Lands and Forests, Surveys Branch **Man.:**—Dept. of Mines and Natural Resources **Sask.:**—Dept. of Natural Resources **Alta., B.C.:**—Depts. of Lands and Forests
Dept. of Northern Affairs and National Resources National Parks Branch Canadian Government Travel Bureau Dept. of Trade and Commerce Canadian Government Exhibition Commission (displays) National Film Board (films, photographs) Dominion Bureau of Statistics	TOURIST TRADE	**N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Tourist and Information Branch **N.S.:**—Dept. of Public Health, Publicity Bureau **N.B.:**—New Brunswick Travel Bureau **Que.:**—Provincial Tourist Bureau **Ont.:**—Dept. of Travel and Publicity **Man.:**—Dept. of Industry and Commerce **Sask.:**—Bureau of Publications, Tourist Branch **Alta.:**—Dept. of Economic Affairs, Alberta Travel Bureau **B.C.:**—Dept. of Trade and Industry, Government Travel Bureau
Dept. of Trade and Commerce Trade Commissioner Service Commodities Branch (for exports, imports, transportation, etc.) Agriculture and Fisheries Branch Economics Division Industrial Development Branch Information Branch International Trade Relations Branch Canadian Government Exhibition Commission Export Credits Insurance Corporation Standards Branch (weights and measures) International Economic and Technical Co-operation Division (Colombo Plan) Dept. of Northern Affairs and National Resources Canadian Government Travel Bureau Dept. of Secretary of State (for Companies Act and incorporation of companies and of boards of trade) National Film Board (films, filmstrips, photographs, for exhibition publicity purposes) Dominion Bureau of Statistics	TRADE	For incorporation of companies under provincial law, address Provincial Secretaries except B.C. where Attorney-General's Department is the authority. **N'f'ld.:**—Dept. of Economic Development **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., B.C.:**—Depts. of Trade and Industry **N.B.:**—Dept. of Industry and Development **Que.:**—Dept. of Trade and Commerce **Ont.:**—Dept. of Planning and Development, Trade and Industry Branch **Man.:**—Dept. of Industry and Commerce **Sask.:**—Dept. of Co-operation and Co-operative Development, Trade and Business Information Services Saskatchewan Marketing Services Executive Council, Industrial Development Office **Alta.:**—Dept. of Industries and Labour

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of Public Works Development Engineering Branch Trans-Canada Highway Division Information Services Dept. of Northern Affairs and National Resources National Parks Branch (for highways in National Parks) Engineering and Water Resources Branch Engineering and Architectural Division Board of Transport Commissioners (regulations *re* construction and operation of railways; construction and protection of highway crossings; rates of railways, express companies and certain inland water carriers; rates with respect to communications, international bridges and tunnels; issuing of licences to certain inland water carriers; regulations *re* construction of oil and gas pipe lines; statistics pertaining to transportation) Air Transport Board (regulation of commercial air services) Dept. of Transport (railways, civil aviation, marine services, steamship inspection, canals, etc.) Canadian Maritime Commission National Harbours Board St. Lawrence Seaway Authority Trans-Canada Air Lines Northern Transportation Company Limited Dept. of National Health and Welfare Civil Aviation Medicine Division National Film Board (films, filmstrips, photographs) Dominion Bureau of Statistics (statistics of transportation, including highways, motor-vehicles)	TRANSPORTATION	**N'f'ld.:**—Dept. of Public Works **P.E.I.:**—Dept. of Public Works and Highways **N.S.:**—Dept. of Highways and Public Works **N.B.:**—Dept. of Public Works Highways Branch **Que.:**—Dept. of Roads, Transportation Board **Ont.:**—Dept. of Highways, Ontario Northland Transportation Commission **Man.:**—Dept. of Public Works Highways Branch Dept. of Mines and Natural Resources Dept. of Public Utilities Dept. of Industry and Commerce **Sask.:**—Dept. of Highways and Transportation Saskatchewan Transportation Company **Alta.:**—Dept. of Railways and Telephones Dept. of Highways, Highway Traffic Board **B.C.:**—Dept. of Railways Public Utility Commission Dept. of Public Works Bureau of Economics and Statistics
Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (Yukon and Northwest Territories) National Parks Branch Dept. of Citizenship and Immigration Indian Affairs Branch National Film Board (films, photographs) Dominion Bureau of Statistics (for general trapping statistics)	TRAPPING See *also* "Fur Farming"	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., Ont., Alta.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Game and Fish **Man.:**—Dept. of Mines and Natural Resources **Sask.:**—Dept. of Natural Resources Fur Marketing Service **B.C.:**—Attorney - General's Dept. Provincial Game Commissioner
	TRUST AND LOAN COMPANIES See "Banking"	
Dept. of Labour Economics and Research Branch Unemployment Insurance Commission Dominion Bureau of Statistics	UNEMPLOYMENT	**N'f'ld., Sask.:**—Dept. of Labour **Ont.:**—Dept. of Public Welfare Bureau of Statistics and Research **B.C.:**—Bureau of Economics and Statistics

Sources for Federal Data	**Subject**	**Sources for Provincial Data**
Dept. of Veterans Affairs (general information rehabilitation, veterans' welfare, training, treatment, land settlement, gratuities, re-establishment credit, education of children of war dead, veterans' insurance, business and professional loans, records of service, war graves and medals) Canadian Pension Commission (The Pension Act) War Veterans Allowance Board (The War Veterans Allowance Act) Dept. of Labour (unemployment insurance and war veteran allowances, vocational training) Dept. of Finance (veterans business and professional loans) National Film Board (films, photographs) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indian veterans)	VETERANS AFFAIRS	**P.E.I.:**—Provincial Secretary **N.S.:**—Dept. of Public Welfare **N.B.:**—Dept. of Health and Social Services **Que.:**—Dept. of Social Welfare and Youth **Ont.:**—Dept. of Public Welfare, Soldiers Aid Commission **Sask.:**—Dept. of Social Welfare, Rehabilitation Division **Alta.:**—Veterans Welfare Advisory Commission **B.C.:**—Dept. of Provincial Secretary
Dominion Bureau of Statistics Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (for Yukon and Northwest Territories) Public Archives (early census records)	VITAL STATISTICS	**N'f'ld., B.C.:**—Depts. of Health **P.E.I.:**—Registrar of Births. Deaths and Marriages **N.S., Alta.:**—Depts. of Public Health Registrars General **N.B.:**—Dept. of Health and Social Service **Que.:**—Dept. of Health Vital Statistics Branch **Ont.:**—Dept. of Municipal Affairs Vital Statistics Branch **Man.:**—Dept. of Health and Public Welfare **Sask.:**—Dept. of Public Health, Vital Statistics Branch
Dept. of Labour Industrial Relations Branch (fair wages) Economics and Research Branch Legislation Branch Dominion Bureau of Statistics	WAGES (including Working Conditions)	**All Provinces except Alta.:**—Depts. of Labour **Alta.:**—Dept. of Industries and Labour *Additional:*—**B.C.:**—Dept. of Trade and Industry, Bureau of Economics and Statistics
Dept. of Northern Affairs and National Resources Engineering and Water Resources Branch Dept. of Fisheries (where fishery resources are affected) Dept. of Agriculture Prairie Farm Rehabilitation Administration Dept. of Mines and Technical Surveys (groundwater supplies and industrial water resources)	WATER RESOURCES	**N'f'ld :**—Dept. of Mines and Resources **N.S.:**—Nova Scotia Power Commission **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Hydraulic Resources **Ont.:**—Depts. of Planning and Development; Lands and Forests **Man.:**—Dept. of Mines and Natural Resources. Water Resources Branch **Sask., Alta.:**—Depts. of Agriculture **B.C.:**—Dept. of Lands and Forests
Dept. of Transport Meteorological Division, Toronto National Research Council Division of Building Research Climatological Atlas of Canada	WEATHER	

Sources for Federal Data	Subject	Sources for Provincial Data
Dept. of National Health and Welfare Welfare Branch Research Division Dept. of Labour Unemployment Insurance Commission Annuities Branch National Advisory Committee on the Rehabilitation of Disabled Persons Dept. of Northern Affairs and National Resources Northern Administration and Lands Branch (for Eskimos) Yukon Territorial Council, Dawson (for Y.T.) Northwest Territories Council, Ottawa (for N.W.T.) Dept. of Citizenship and Immigration Indian Affairs Branch (for Indians) National Film Board (films, photographs)	WELFARE For 'Welfare of Veterans' See "Veterans Affairs"	**N'f'ld., N.S., Ont., Alta.:**—Depts. of Public Welfare **P.E.I., B.C.:**—Depts. of Health and Welfare **N.B.:**—Dept. of Health and Social Services **Que.:**—Dept. of Social Welfare and Youth **Man.:**—Dept. of Health and Public Welfare **Sask.:**—Dept. of Social Welfare
Dept. of Northern Affairs and National Resources (also for Northwest Territories) National Parks Branch Canadian Wildlife Service National Museum of Canada Commissioner of Yukon Territory, Whitehorse (for Y.T.) National Film Board (films, photographs) Dept. of Fisheries Information and Educational Service	WILDLIFE	**N'f'ld.:**—Dept. of Mines and Resources **P.E.I.:**—Dept. of Industry and Natural Resources **N.S., Ont., Alta.:**—Depts. of Lands and Forests **N.B.:**—Dept. of Lands and Mines **Que.:**—Dept. of Game and Fish **Man.:**—Dept. of Mines and Natural Resources **Sask.:**—Dept. of Natural Resources, Game Commissioner **B.C.:**—Attorney General's Dept. Provincial Game Commissioner
Dept. of Labour Government Employees' Compensation Branch Merchant Seamen Compensation Board	WORKMEN'S COMPENSATION	Provincial Workmen's Compensation Boards at: **N'f'ld.:**—St. John's **P.E.I.:**—Charlottetown **N.S.:**—Halifax; **N.B.:**—Saint John **Ont.:**—Toronto; **Man.:**—Winnipeg **Sask.:**—Regina; **Alta.:**—Edmonton **B.C.:**—Vancouver **Que.:**—Workmen's Compensation Commission

PART II.—SPECIAL MATERIAL PUBLISHED IN FORMER EDITIONS OF THE CANADA YEAR BOOK

It is not possible to include in any single edition of the Year Book all articles and descriptive text of previous editions. Therefore, the following list has been compiled as an index to such miscellaneous material and special articles as are not repeated in the present edition. This list links up the 1955 Year Book with its predecessors in respect of matters that have not been subject to wide change. Those Sections of Chapters, such as "Population", which are automatically revived when later Census material is made available and to which adequate references are made in the text, are not listed unless they are in the nature of special contributions. The latest published article on each subject is shown, except when an earlier article includes material not repeated in the later one. When an article covers more than one subject it is listed under each appropriate heading.

The articles marked with an asterisk (*) are available in reprint form from the Dominion Statistician at the price quoted.

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Agriculture—			
The Development of Agriculture in Canada	J. H. Grisdale, D.Sc.A.	1924	186–191
Prairie Farm Rehabilitation Program....	William Dickson.	1938	223–230
Historical Background of Canadian Agriculture..................................	G. S. H. Barton, C.M.G., B.S.A., D.Sc.A.	1939	187–190
The War and Canadian Agriculture.......	—	1945	188–191
Agricultural Marketing Legislation, 1939..	—	1940	181–185
Canadian Agriculture during the War and Post-War Periods......................	G. S. H. Barton, C.M.G., B.S.A., D.Sc.A.	1946	200–211
The 1946–47 National Agricultural Program and Policy.....................	—	1947	324–328
*Irrigation in Western Canada (10 cts.)....	W. J. Jacobson. J. E. Lane.	1947	375–382
*The Canadian Wheat Board, 1939–46 (15 cts.).............................	C. B. Davidson. T. W. Grindley. W. G. Malaher. C. V. Parker.	1947	778–813
The Major Soil Zones and Regions of Canada................................	P. C. Stobbe.	1951	352–356
Agricultural Irrigation and Land Conservation................................	—	1951	367–379
Grain Trade—Marketing Problems and Policies, 1949–52......................	—	1952–53	865–869
Major Developments in Organization and Policy of the Federal Department of Agriculture............................	—	1954	366–370
Art, Literature and the Press—			
Art in Canada............................	—	1924	886–888
The Development of the Fine Arts in Canada................................	Newton MacTavish, M.A., D. Litt.	1931	995–1009

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Art, Literature and the Press—concluded			
A Bibliography of Canadian History.....	Gustave Lanctot, LL.M., D.Litt., LL.D., K.C., F.R.S.C.	1939	36–40
The Development of the Press in Canada.	A. E. Millward, B.A., B. Com.	1939	737–773
*The Democratic Functioning of the Press (10 cts.).............................	Senator, the Hon. W. A. Buchanan.	1945	744–748
Royal Commission on National Development in the Arts, Letters and Sciences..	—	1951	315–316
Report of the Royal Commission on National Development in the Arts, Letters and Sciences..................	—	1952–53	342–345
Banking and Finance—			
Life Insurance—A Historical Sketch......	A. D. Watson.	1925	860–864
Banking Legislation.....................	—	1931	891–896
The Bank of Canada and its Relation to the Financial System.................	—	1937	881–885
Historical Sketch of Currency and Banking	—	1938	900–906
The Royal Canadian Mint...............	H. E. Ewart.	1940	888–892
The Wartime Functions of a Central Bank.	—	1942	803–806
Wartime Control under the Foreign Exchange Control Board.................	R. H. Tarr.	1941 1942	833–835 830–833
*The Underwriting and Distribution of Investments; their Influence on the Capital Market (10 cts.).	Investment Dealers Association of Canada.	1950	1088–1095
Post-War Financial Policy...............	—	1954	1061–1064
Citizenship—			
Early Naturalization Procedure and Events Leading up to the Canadian Citizenship Act.......................	—	1951	153–15
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The Meteorological Service of Canada....	Sir Frederick Stupart, F.R.S.C.	1922–23	43–48
Factors which Control Canadian Weather.	Sir Frederick Stupart, F.R.S.C.	1925	36–40
Temperature and Precipitation in Northern Canada...........................	A. J. Connor, M.A.	1930	41–56
Droughts in Western Canada.............	A. J. Connor, M.A.	1933	47–59
*Meteorology Related to the Science of Aviation (10 cts.).....................	J. Patterson, O.B.E., LL.D.	1943–44	24–29
The Climate of Canada (textual article)..	A. J. Connor, M.A.	1948–49	41–62
The Climate of Canada (tabular material)	A. J. Connor, M.A.	1950	33–70
Constitution and Government—			
Provincial and Local Government in—			
Maritime Provinces....................	Thomas Flint, M.A., LL.B., D.C.L.	1922–23	102–105
Quebec................................	G. E. Marquis.	1922–23	105–107
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British Columbia	John Hosie.	1922–23	113–115
Canada and the League of Nations	N. A. Robertson.	1931	115–122
The Government of Canada's Arctic Territory	R. A. Gibson.	1938	92–93
The Evolution of the Constitution of Canada down to Confederation	S. A. Cudmore, B.A. (Tor.), M.A. (Oxon.), F.S.S., F.R. Econ. Soc., and E. H. Coleman, K.C., LL.D.	1942	34–40
The British North America Act, 1867	—	1942	40–59
Canada's Present Status in the British Commonwealth of Nations	W. P. J. O'Meara, K.C., B.A.	1943–44	41–47
Canada's Growth in External Status	F. H. Soward.	1945	74–79
*Canada's Part in the Relief and Rehabilitation of the Occupied Territories (10 cts.)	—	1945	79–85
*Constitution and Government (15 cts.)	—	1948–49	78–122
The Constitutional Development of Newfoundland prior to Union with Canada, 1949	—	1950	85–92
*The Organization of the Government of Canada (25 cts.)	—	1950	93–133
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*Administrative Functions of the Federal Government (25 cts.)	—	1954	74–90
*International Activities	—	1954	103–117
Construction—			
The Effects of Government Wartime Expenditures on the Construction Industry	H. Carl Goldenberg.	1941	366–368
Crime and Delinquency—			
A Historical Sketch of Criminal Law and Procedure	R. E. Watts.	1932	897–899
*The Influence of the Royal Canadian Mounted Police in the Building of Canada (25 cts.)	S. T. Wood, C.M.G.	1950	317–331
Education—			
Recent Advances in the Field of Education in Canada	J. E. Robbins, Ph.D.	1941	876–883
Canada and UNESCO	J. E. Robbins, Ph.D.	1947	313–315
Royal Commission on National Development in the Arts, Letters and Sciences	—	1951	315–316
Report of the Royal Commission on National Development in the Arts, Letters and Sciences	—	1952–53	342–345
Fauna and Flora—			
Faunas of Canada	P. A. Taverner.	1922–23	32–36
Faunas of Canada	R. M. Anderson, Ph.D.	1937	29–52
Flora of Canada	John Adams, M.A. (Cantab.)	1938	29–58

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Fauna and Flora—concl.			
The Canadian Government's Reindeer Experiment	—	1943–44	17–23
*Migratory Bird Protection in Canada (10 cts.)	—	1951	38–43
*The Barren-Ground Caribou (10 cts.)	—	1954	33–36
Fisheries—			
The Fish Canning and Curing Industry	D. B. Finn, Ph.D.	1941	225–226
The Effects of the War on Canadian Fisheries	D. B. Finn, Ph.D.	1943–44	277–279
The Fisheries of Canada	—	1951	472–479
Game Fish in Canada's National Parks	V. E. F. Solman, Ph.D.	1952–53	34–36
Forestry—			
A Sketch of the Canadian Lumber Trade	A. R. M. Lower, M.A.	1925	318–323
Physiography, Geology and Climate as Affecting the Forests	—	1934–35	311–313
The War and the Demand for Forest Products	—	1942	249–252
The Influence of the War on the Pulp and Paper Industry	—	1943–44	264–265
The Influence of the War on Forestry	—	1945	266–268
*Noxious Forest Insects and Their Control (10 cts.)	J. J. de Gryse.	1947	389–400
Canada's Forest Economy	—	1951	425–437
*The Pulp and Paper Industry in Canada (10 cts.)	—	1952–53	467–475
Administration of Crown Forests in Canada	—	1954	458–465
Fur Trade—			
Fur Farming	W. M. Ritchie.	1942	254–259
The Development of Marshlands in Relation to Fur Production and the Rehabilitation of Fur-Bearers	D. J. Allan.	1943–44	267–269
Geology—			
Geology in Relation to Agriculture	Wyatt Malcolm, M.A., F.R.S.C.	1921	68–72
Geology and Economic Minerals	George Hanson, Ph.D.	1942	3–14
Geology	F. J. Alcock, Ph.D.	1951	14–26
Harbours—			
National Harbours Board	R. O. Campney, K.C.	1940	679–681
Health and Welfare—			
Development of Public Health, Welfare and Social Security in Canada	Dr. G. F. Davidson.	1952–53	224–229
The National Health Grant Program	—	1954	215–223
Insurance—			
The Growth and Development of Life Insurance in Canada	A. D. Watson.	1933	937–944
Fire and Casualty Insurance	G. D. Finlayson, C.M.G.	1942	842–846
*Insurance in Canada during the Depression and War Periods (10 cts.)	G. D. Finlayson, C.M.G.	1947	1064–1074
Labour—			
Legislation Respecting Combinations in Restraint of Trade	F. A. McGregor.	1927–28	765–770
The National Employment Commission	—	1938	778–779
Labour Legislation in Canada	Miss M. Mackintosh, M.A.	1938	787–796

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Manufactures—			
The Iron and Steel Industry	—	1922–23	452–456
The Influence of the Present War on Manufacturing	—	1943–44	354–362
Changes in Canadian Manufacturing Production from Peace to War, 1939-44	—	1945	364–381
*The Automobile Industry in Canada (10 cts.)	H. McLeod.	1947	521–525
*The Chemical Industries in Canada (10 cts.)	H. McLeod.	1948–49	532–550
*The Pulp and Paper Industry in Canada (10 cts.)	—	1952–53	467–475
Mining—			
Mining—A Historical Sketch	—	1939	309–310
Geology and Economic Minerals	George Hanson, Ph.D.	1942	3–14
Government Control of Non-Ferrous Metals and Fuels in Wartime	—	1942	279–282
The Outlook for the Mineral Industry in Relation to the Economic Development of Canada	G. H. Murray.	1946	302–314
The Coal Deposits and Coal Resources of Canada	B. R. MacKay, B.Sc., Ph.D.	1946	337–347
The Iron-Ore Resources of the Quebec-Labrador Region	W. M. Goodwin.	1950	505–512
Titanium—The Basis of a New Industry in Quebec	W. M. Goodwin.	1950	512–513
*Post-War Expansion in Canada's Mineral Industry (25 cts.)	G. H. Murray and Mrs. M. J. Giroux.	1952–53	476–495
*Canadian Crude Petroleum Situation (10 cts.)	Dr. G. S. Hume.	1952–53 1954	524–527 540–544
Developments in Canada's Mineral Industry, January 1952 to June 1953	G. H. Murray. M. J. Giroux.	1954	482–506
*History of Pipeline Construction in Canada	Dr. G. S. Hume.	1954	861–869
National Defence—			
The Royal Canadian Naval College	—	1946	1081–1082
The Royal Military College	—	1946	1087–1088
The British Commonwealth Air Training Plan — A Summary of the RCAF's Major Role in the War of 1939–45	—	1946	1090–1099
Natural Resources—			
A Sketch of the Canadian Lumber Trade	A. R. M. Lower, M.A.	1925	318–323
Fur Trade—A Historical Sketch	—	1934–35	343–344
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The Water - Power Resources of Canada and their Utilization	J. T. Johnston.	1940	353–364
Geology and Economic Minerals	George Hanson, Ph.D.	1942	3–14
The Development of Marshlands in Relation to Fur Production and the Rehabilitation of Fur-Bearers	D. J. Allan.	1943–44	267–269
Game Fish in Canada's National Parks	V. E. F. Solman, Ph.D.	1952–53	34–36
*The Barren-Ground Caribou (10 cts.)	—	1954	33–36
Northwest Territories—			
The Canadian Government's Reindeer Experiment	R. A. Gibson.	1943–44	17–23

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Physiography—			
Physical Geography of the Canadian Eastern Arctic	R. A. Gibson.	1945	12–19
The Relation of Hydrography to Navigation and the War Record of the Hydrographic and Map Service	F. G. Smith.	1946	14–18
*Physical Geography of the Canadian Western Arctic (10 cts.)	R. A. Gibson.	1948–49	9–18
Population—			
Immigration Policy	R. J. C. Stead.	1931	189–192
Colonization Activities	—	1936	201–202
Occupational Trends in Canada, 1891–1931	A. H. LeNeveu, M.A.	1939	774–778
Nuptiality and Fertility in Canada	Enid Charles, Ph.D.	1942	100–115
Areas and Populations of Countries of the British Empire, 1941	—	1943–44	141–142
The Indians of Canada	—	1951	1125–1132
Power Resources—			
The Water-Power Resources of Canada and Their Utilization	J. T. Johnston.	1940	353–364
*Conversion Program to 60-cycle Power in Southern Ontario (10 cts.)	—	1951	540–548
Prices—			
The Nutrition and Family Living Expenditures Investigation	H. F. Greenway, M.A.	1940	819–821
The Activities of the Wartime Prices and Trade Board in Controlling Prices, Rents and Supplies	—	1943–44	776–783
Activities of the Wartime Prices and Trade Board, 1945–46	—	1946	851–858
Activities of the Wartime Prices and Trade Board, 1946–47	—	1947	916–924
Activities of the Wartime Prices and Trade Board, 1947–48	—	1948–49	945–950
The Royal Commission on Prices	—	1950	978–982
Activities of the Wartime Prices and Trade Board, 1948–49	—	1950	983–985
Radio—			
A Historical Sketch of Radio Communications	C. P. Edwards, O.B.E.	1932	607–610
The Canadian Radio Broadcasting Commission	Hector Charlesworth	1933	731–733
*History and Development of the Canadian Broadcasting Corporation (10 cts.)	Dr. Augustin Frigon, C.M.G.	1947	737–740
Research—			
Honorary Advisory Council for Scientific Research	—	1920	53–57
Royal Canadian Institute	Prof. McMurrich, M.A., Ph.D., LL.D., F.R.S.C.	1924	885
Royal Society of Canada	Prof. McMurrich, M.A., Ph.D., LL.D., F.R.S.C.	1924	884
The National Research Council	F. E. Lathe, M.Sc.	1932	867–870

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Research—concluded			
*Scientific and Industrial Research in Canada (25 cts.)	—	1954	341–356
*Geophysics (10 cts.)	—	1948–49	18–27
*The Contribution to Science made by the Dominion Astrophysical Observatory (10 cts.)	Dr. J. A. Pearce.	1948–49	63–71
Seismology—			
Seismology in Canada	E. A. Hodgson, Ph.D.	1938	27–30
Time and Time Zones—			
Standard Time and Time Zones in Canada	C. C. Smith.	1934–35	50–53
Times of Sunrise and Sunset	—	1938	66–68
Trade, Domestic—			
Co-operation in Canada	J. E. O'Meara and Lucienne M. Lalonde	1942	543–546
Wartime Controls Affecting Distribution and Trade, 1945–46	—	1946	574–578
*The Royal Commission on Co-operatives (10 cts.)	W. F. Chown.	1946	618–624
*The Canadian Wheat Board, 1939–46 (15 cts.)	C. B. Davidson. T. W. Grindley. W. G. Malaher. C. V. Parker.	1947	778–813
Grain Trade—Marketing Problems and Policies, 1949–52	—	1952–53	865–869
Trade, Foreign—			
Advisory Board on Tariff and Taxation	—	1930	1018
Preferential Tariff and Trade Treaties	W. Gilchrist.	1934–35	520–526
Transportation—			
The Development of Aviation in Canada	J. A. Wilson.	1938	710–712
The Trans-Canada Airway	J. A. Wilson.	1938	713–715
Pre-War Civil Aviation and the Defence Program	J. A. Wilson.	1941	608–612
Wartime Control of Transportation	—	1943–44	567–575
International Air Conferences	—	1945	642–644
The Wartime Role of the Steam Railways of Canada	C. P. Edwards, O.B.E.	1945	648–651
Canada's Northern Airfields	A. D. McLean.	1945	705–712
The Trans-Canada Highway	—	1951	631–634
*International Civil Aviation Organization and Canada's Participation Therein (10 cts.)	Brig. C. S. Booth.	1952–53	820–827
Canals of the St. Lawrence Waterway	—	1954	830–833
United Nations—			
Canada and the United Nations	C. S. A. Ritchie.	1946	82–86
Canada and the United Nations	—	1948–49	122–125
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PART III.—REGISTER OF OFFICIAL APPOINTMENTS, 1954

The following list of official appointments continues, up to Dec. 31, 1954, that published in the 1954 Year Book, pp. 1246-1255.

Governor General's Staff.—1954. *Jan. 29,* Commander Dunn Lantier, D.S.O., C.D., RCN: to be Honorary Aide-de-Camp, effective Jan. 29, 1954. *May 12,* Acting Commander J. H. Stevenson, RCN(R): to be Honorary Aide-de-Camp, effective May 12, 1954. *June 14,* Brigadier J. Bibeau, D.S.O., ED: to be Honorary Aide-de-Camp, effective June 14, 1954. *July 1,* Hon. Patrick Kerwin, Chief Justice of Canada: to be Deputy of His Excellency the Governor General. *July 16,* Inspector Robert Auburn Stewart MacNeil, O.B.E., of the Royal Canadian Mounted Police, Ottawa: to be Honorary Aide-de-Camp, effective Aug. 1, 1954, *vice* Superintendent C. N. K. Kirk. Inspector René John Belec, of the Royal Canadian Mounted Police, Fort Smith, N.W.T.: to be Honorary Aide-de-Camp, effective Aug. 1, 1954, *vice* Inspector W. J. Fitzsimmons. *Sept 1,* Acting Commodore P. D. Budge, RCN: to be Honorary Aide-de-Camp, effective Sept. 1, 1954. *Oct. 26,* Acting Lt.-Col. G. M. Brown, C.D.: to be Honorary Aide-de-Camp, effective Oct. 26, 1954.

Privy Councillors.—1954. *July 1,* Roch Pinard: to be a Member of the Queen's Privy Council for Canada. George Carlyle Marler: to be a Member of the Queen's Privy Council for Canada. Hon. Patrick Kerwin, Chief Justice of Canada: to be a Member of the Queen's Privy Council for Canada.

Cabinet Ministers.—1954. *Jan. 12,* Hon. William Ross Macdonald, a Member of the Queen's Privy Council for Canada and Leader of the Government in the Senate: to be Solicitor General of Canada, *vice* Hon. Ralph Osborne Campney, resigned. *July 1,* Hon. Walter Edward Harris, a Member of the Queen's Privy Council for Canada: to be Minister of Finance and Receiver General. Hon. Ralph O. Campney, a Member of the Queen's Privy Council for Canada: to be Minister of National Defence. Hon. John Whitney Pickersgill, a Member of the Queen's Privy Council for Canada: to be Minister of Citizenship and Immigration. Hon. Roch Pinard, a Member of the Queen's Privy Council for Canada: to be Secretary of State for Canada. Hon. George Carlyle Marler, a Member of the Queen's Privy Council for Canada: to be Minister of Transport.

Deputy Ministers.—1954. *July 1,* John Russell Baldwin: to be Deputy Minister of Transport. *July 6,* J. Gear McEntyre, Q.C.: to be Deputy Minister of National Revenue for Taxation. *Sept. 17,* David Aaron Golden, Assistant Deputy Minister of Defence Production and General Counsel: to be Deputy Minister of Defence Production, effective Oct. 1, 1954. *Dec. 8,* George Russell Clark, Assistant Deputy Minister of Fisheries: to be Deputy Minister of Fisheries, effective Dec. 8, 1954.

Diplomatic Appointments.—1954. *June 10,* Hon. Thomas Clayton Davis, Q.C.: as Ambassador of Canada to Japan. George Loranger Magann: as Minister for Canada to Austria. *July 9,* R. R. Saksena: as High Commissioner for Burma in Canada. *July 12,* Dr. Mohamed Abdul Rauf: as High Commissioner for India in Canada. *Nov. 18,* Paul Emile Renaud: as Ambassador for Canada to Chile. H. F. Feaver: as Minister for Canada to Denmark. Harry A. Scott: as Ambassador for Canada to Dominican Republic and Haiti. Kenneth P. Kirkwood: as Ambassador for Canada to Egypt and Lebanon. Terence W. L. MacDermot: as Ambassador for Canada to Israel (also Ambassador to Greece). Douglas Seaman Cole: as Ambassador for Canada to Mexico. S. Morley Scott: as High Commissioner for Canada to Pakistan. *Nov. 29*, Segio Fenoaltea: as Ambassador to Canada for Italy. *Dec. 9*, Bedrich Hruska: as Minister to Canada for Czechoslovakia. *Dec. 29*, Enrique José Guillermo Plate: as Ambassador to Canada for Argentina.

Judicial Appointments

Higher Courts.—**1954.** *Apr. 8*, Charles Lamb, Prothonotary of the Supreme Court and Clerk of the County Court at Halifax, N.S.: to be Registrar of the Exchequer Court of Canada on its Admiralty side for the Admiralty District of the Province of Nova Scotia, *vice* Bryant Harding Balcom, resigned. *July 1*, Hon. Patrick Kerwin, one of the Puisne Judges of the Supreme Court of Canada: to be Chief Justice of Canada. Hon. Douglas Charles Abbott: to be a Puisne Judge of the Supreme Court of Canada. Hon. Herbert William Davey, a Judge of the Supreme Court of British Columbia: to be a Justice of Appeal of the Court of Appeal for British Columbia, effective Sept. 1, 1954. Harold W. McInnes, Penticton, B.C.: to be a Judge of the Supreme Court of British Columbia, effective Sept. 1, 1954. M. M. Porter, Calgary, Alta.: to be a Judge of the Appellate Division of the Supreme Court of Alberta and ex officio a Judge of the Trial Division of the said Court, effective Sept. 1, 1954. Neil Primrose, Edmonton, Alta.: to be a Judge of the Trial Division of the Supreme Court of Alberta and ex officio a Judge of the Appellate Division of the said Court, effective Sept. 1, 1954. *Aug. 18*, Jean Martineau, Q.C.: to be a Puisne Judge of the Court of Queen's Bench in and for the Province of Quebec, effective Sept. 30, 1954. *Dec. 16*, H. G. Johnson, Q.C.: to be a Judge of the Appellate Division of the Supreme Court of Alberta. *Dec. 22*, Albert Racette, Deputy Sheriff of the City of Quebec: to be Registrar of the Exchequer Court on its Admiralty side for the Quebec Registry Division, *vice* Adj. Lachance, resigned.

County and District Courts.—**1954.** *Dec. 1*, Hon. Walter E. Darby, Q.C.: to be Judge of the County Court for the County of Prince, P.E.I. Frank Fingland, Q.C.: to be Judge of the County Court for the County of Huron, Ont., also Local Judge of the High Court of Justice for Ontario.

Government Appointments to Miscellaneous Boards, Commissions, etc.

Air Transport Board.—**1954.** *July 6*, Wilbert Jamieson Matthews: to be a Member for a period of ten years and to be Chairman of the said Board.

Army Benevolent Fund Board.—**1954.** *Apr. 22*, Lieutenant-General John Carl Murchie, C.B., C.B.E.: to be a Member and Chairman for a term of four years from May 4, 1954.

Bank of Canada.—**1954.** *Jan. 7*, John L. Cavanagh: to be a Director for a term expiring Feb. 28, 1955, the remainder of the term of C. J. Morrow, resigned. *Nov. 18*, James E. Coyne, to be Governor; J. R. Beattie, to be Deputy Governor; both for a period of seven years effective Jan. 1, 1955.

Canadian Broadcasting Corporation.—**1954.** *Jan. 12*, Kenneth G. Montgomery: to be a Governor for a period of three years from Jan. 1, 1954. *Nov. 23*, Roland Kenneth Gervin, Vice-President of the Trades and Labour Congress of Canada: to be a Governor for a term of three years from Nov. 1, 1954.

Canadian Pension Commission.—**1954.** *Apr. 14,* Laurence Wilmott Brown, M.D., C.M.: to be a Member for a period of seven years from July 1, 1954. *Nov. 18,* John Murray Forman: to be a Member for a period of ten years from Feb. 1, 1955.

Canadian Commercial Corporation.—**1954.** *Apr. 22,* Albert Brewer Hunt, Director, Electronics Branch, Department of Defence Production: to be a Director, *vice* G. M. Grant, resigned. *May 27,* Thor Eyolfur Stephenson: to be a Director, effective June 1, 1954. *Nov. 9,* William Henry Huck, Financial Advisor, Department of Defence Production: to be a Director, *vice* D. A. Golden, resigned.

Central Mortgage and Housing Corporation.—**1954.** *Dec. 1,* Stewart Bates: to be President, effective Dec. 6, 1954.

Defence Research Board.—**1954.** *Apr. 14,* Randolphe William Diamond and Chalmers Jack Mackenzie: to be Members, from Apr. 1, 1954, to Mar. 31, 1957. *Nov. 23,* Reginald McLaren Brophy: to be a Member representative of the Department of Defence Production, effective Jan. 1, 1954.

Export Credits Insurance Corporation.—**1954.** *Jan. 14,* Mitchell W. Sharp, Assistant Deputy Minister of Trade and Commerce: to be a Director. *Apr. 22,* A. F. W. Plumptre: to be a Director. J. J. Deutsch: to be an alternate Director for K. W. Taylor, Deputy Minister of Finance and a Member. J. E. Coyne: to be an alternate Director for G. F. Towers, Governor of the Bank of Canada and a Member. J. H. English: to be an alternate Director for W. F. Bull, Deputy Minister of Trade and Commerce and a Member.

Historic Sites and Monuments Board of Canada.—**1954.** *Oct. 28,* Thomas Head Raddall: to be a Member, representing the Province of Nova Scotia, for a period of five years, *vice* Professor D. C. Harvey, resigned.

Income Tax Appeal Board.—**1954.** *Jan. 14,* Cecil L. Snyder, Q.C.: to be a Member and Assistant Chairman and to hold office for a period of 10 years, effective Feb. 1, 1954.

International Supervisory Commission for Cambodia.—**1954.** *Dec. 16,* Rudolph Duder: to be Canadian Commissioner.

International Whaling Commission.—**1954.** *June 3,* G. R. Clark, Assistant Deputy Minister of Fisheries: to be a Member to represent the Government of Canada.

Lake of the Woods Control Board.—**1954.** *Feb. 11,* E. V. Gilbert, an engineer of the Department of Public Works: to be a Member, *vice* Robert Blais, retired.

National Film Board.—**1954.** *July 13,* Jules Léger: to be a Member, effective Aug. 1, 1954. *Oct. 28,* Bruce Hutchison and Mitchell W. Sharp: to be Members. Charles S. Band: to be again a Member, effective Oct. 14, 1954.

National Library.—**1954.** *Dec. 16,* The following persons to be Members of the Advisory Council for a term of four years effective Jan. 1, 1955: Abbé Arthur Maheux, Miss Freda F. Waldon, and George E. Wilson.

National Research Council.—**1954.** *Apr. 8,* The following persons to be Members for a term of three years, expiring Mar. 31, 1957: A. N. Campbell, M.Sc., Ph.D., D.Sc., F.R.S.C., Professor of Chemistry, University of Manitoba, Winnipeg, Man. Gordon G. Cushing, Secretary-Treasurer, Trades and Labour Congress of Canada, 172 MacLaren St., Ottawa, Ont. G. E. Hall, A.F.C., E.D., M.S.A., M.D., D. és Sc., Ph.D., F.R.S.C., President and Vice-Chancellor of the University of Western Ontario, London, Ont. Cyrias Ouellet, D. és Sc., F.R.S.C., Professor of Chemistry, Laval University, Quebec, Que. Henri Gaudefroy, S.B., I.C., Director, Ecole Polytechnique, Montreal, Que. Abel Gauthier, L.Sc., M.A., Vice-Dean, Faculty of Science, University of Montreal, Montreal, Que.

Northwest Territories.—**1954.** *July 1,* Frank J. G. Cunningham, Director of Northern Administration and Lands Branch, Department of Northern Affairs and National Resources: to be a Member of the Council and Deputy Commissioner of the Northwest Territories. Louis de la Chesnaye Audette, Chairman, Canadian Maritime Commission: to be a Member of the Council. Leonard Hanson Nicholson, Commissioner of the Royal Canadian Mounted Police: to be a Member of the Council. William Isaac Clements, Air Commodore: to be a Member of the Council. Jean Boucher, Assistant to Deputy Minister of Citizenship and Immigration: to be a Member of the Council. *Sept. 17,* Charles Mills Drury, Deputy Minister of National Defence: to be a Member of the Council, *vice* William Isaac Clements, resigned.

Port Warden.—**1954.** *June 17,* Captain F. S. Slocombe, Supervisor of Nautical Services, Department of Transport, Ottawa: to be Port Warden at and for the harbour of Port Churchill, Man., *vice* Captain J. W. Kerr, deceased.

St. Lawrence River Joint Board of Engineers.—**1954.** *Oct. 13,* The following persons to be representatives of Canada: Hon. G. C. Marler, Minister of Transport, Ottawa, Ont., to be Chairman of the Canadian Section; Hon. Lionel Chevrier, Q.C., President, The St. Lawrence Seaway Authority; alternates, M. V. Sauer and H. W. Lea, Consulting Engineers.

St. Lawrence Seaway Authority.—**1954.** *July 1,* Hon. Lionel Chevrier: to be President for a term of 10 years. Charles Gavsie: to be a Member for a term of 10 years, and to exercise and perform all the powers and functions of the President during incapacity or absence for any reason of the President or a vacancy in the office of President. Charles William West: to be a Member for a term of three years.

Superintendent of Bankruptcy.—**1954.** *Dec. 22,* Angus Hugh MacDonnell Laidlaw, Senior Advisory Counsel, Department of Justice: to be Superintendent of Bankruptcy, *vice* Allan Joseph MacLeod, resigned, effective Jan. 1, 1955.

Transport Controller.—**1954.** *June 1,* Roy Wilfred Milner: to be Transport Controller, Department of Transport, Ottawa.

Under-Secretary of State for External Affairs.—**1954.** *July 1,* Jules Léger: to be Under-Secretary of State for External Affairs, effective Aug. 1, 1954.

Unemployment Insurance Act.—**1954.** *Oct. 28,* Marcel Nichols: to be Chairman of the Courts of Referees for the Quebec Regional Division and more particularly for the District of Drummondville, *vice* Honore N. Garceau, Q.C., deceased. Leo McLaughlin: to be Chairman of the Courts of Referees for the Ontario Region and more particularly for the District of Toronto, *vice* Frederick W. Rayfield, resigned.

Vocational Training Advisory Council.—**1954.** *Apr. 1,* The following persons to be Members for a period of three years expiring Dec. 1, 1956: W. H. C. Seeley, Toronto Transportation Commission, representing the Canadian Manufacturers' Association; N. S. Dowd, Canadian Congress of Labour, representing organized labour; E. K. Ford, Director of Vocational Education, N.S., representing the Province of Nova Scotia; T. D. Anderson, General Secretary, Canadian Legion, representing veterans; J. W. McNutt, Director of Vocational Education, N.B., representing the Province of New Brunswick; J. A. Doyle, Director of Technical Education, Sask., representing the Province of Saskatchewan. *Sept. 1,* The following persons to be Members: for a period expiring Nov. 30, 1954, R. E. Byron, Director of Vocational Education, representing the Province of Alberta (Member) and W. H. Swift, Deputy Minister of Education, Alta., representing the Province of Alberta (Alternate Member); for a period expiring Nov. 30, 1955, L. W. Shaw, Deputy Minister and Director of Education, P.E.I., representing the Province of Prince Edward Island (Member) and W. S. McMurtry, Director, Charlottetown Vocational School, representing the Province of Prince Edward Island (Alternate Member); for a period expiring Nov. 30, 1956, Jack Wilton, Canadian Federation of Agriculture, representing Agriculture (Member). *Dec. 31,* The following persons to be Members and Alternate Members for a period expiring Dec. 1, 1955: Member—William Leger, President, National Catholic Federation of Building Trades, representing employees, *vice* Miss Yolande Valois, resigned; Alternate Members—Gilles H. Paquette, Canadian Manufacturers Association, representing employers (Alternate for T. H. Robinson), Andre Landry, Director General, Department of Youth and Social Welfare, Que., representing the Province of Quebec, L. S. Smith, Department of Education, Man., representing the Province of Manitoba, Mrs. L. H. Meng, Corresponding Secretary, The National Council of Women of Canada, representing women; for a period expiring Dec. 1, 1956; Alternate Members—H. A. Chappell, Canadian Brotherhood of Employees and Other Transport Workers, representing employees (Alternate for N. S. Dowd), Dr. F. E. MacDiarmid, Director and Chief Superintendent, Department of Education, N.B., representing the Province of New Brunswick, W. D. Mills, Assistant Director of Vocational Education, N.S., representing the Province of Nova Scotia, W. W. Sharpe, Department of Education, Sask., representing the Province of Saskatchewan, Dr. Robert Westwater, Ottawa, Ont., representing veterans, W. E. Weaver, Canadian Manufacturers' Association, representing employers (Alternate for W. H. C. Seeley), David Kirk, Secretary, Canadian Federation of Agriculture, representing Agriculture; for a period expiring Dec. 1, 1957: Member and Chairman—Dr. G. Fred McNally, Edmonton, Alta.; Member—Herbert Cocker, Canadian Construction Association, representing employers, Alternate Member—S. D. C. Chutter, Canadian Construction Association, representing employers; Member—G. G. Cushing, The Trades and Labour Congress of Canada, representing employees, Alternate Member—Thomas B. Ward, The Trades and Labour Congress of Canada, representing employees; Member—Dr. L. S. Beattie, Superintendent of Secondary Education, Ont., representing the Province of Ontario, Alternate Member—A. M.

Moon, Assistant Superintendent of Secondary Education, Ont., representing the Province of Ontario; Member—Dr. G. A. Frecker, Deputy Minister of Education, N'f'ld., representing the Province of Newfoundland, Alternate Member—Frank Templeman, Director of Vocational Education, N'f'ld., representing the Province of Newfoundland; Member—R. E. Byron, Director of Vocational Education, Alta., representing the Province of Alberta, Alternate Member—Dr. W. H. Swift, Deputy Minister of Education, Alta., representing the Province of Alberta; Member—Harold L. Campbell, Deputy Minister and Superintendent of Education, B.C., representing the Province of British Columbia.

Miscellaneous.—**1954.** *Jan. 7,* Robert Broughton Bryce, Clerk of the Queen's Privy Council for Canada and Secretary to the Cabinet: to be a Commissioner to administer oaths and to take and receive declarations and affirmations. *Jan. 28,* George William Hay, M.Sc., and Patricia Jean Clark, M.Sc., technicians in the Royal Canadian Mounted Police Crime Detection Laboratory, Regina, Sask.: to be duly qualified analysts for the purpose of the Opium and Narcotic Drug Act. *Mar. 2,* The following persons to be Members of a Commission to inquire into and report upon the question whether the criminal law of Canada relating to the defence of insanity should be amended: Hon. James Chalmers McRuer, Chief Justice of the High Court of Justice of Ontario; Dr. Gustave Desrochers, Assistant Superintendent of St. Michel Hospital at the City of Quebec; Her Honour Judge Helen Kinnear, County Court Judge for the County of Haldimand, Ontario; Dr. Robert O. Jones, Professor of Psychiatry at Dalhousie University, Halifax, N.S.; and Joseph Harris, Winnipeg, Man. *Mar. 25,* The following persons to be Commissioners, pursuant to Part I of the Inquiries Act, to inquire into and report upon the question whether the criminal law of Canada relating to criminal sexual psychopaths should be amended in any respect and, if so, in what manner and to what extent: Hon. James Chalmers McRuer, Chief Justice of the High Court of Justice of Ontario; Dr. Gustave Desrochers, Assistant Superintendent of St. Michel Hospital at the City of Quebec; Her Honour Judge Helen Kinnear, County Court Judge for the County of Haldimand, Ontario. *Apr. 29,* Dr. W. G. Henry and R. Ironside, of the Division of Applied Chemistry, National Research Council and R. A. Rogers, of the Mines Branch, Department of Mines and Technical Surveys: to be Assay Commissioners to meet in the year 1954 to examine and test coins of the currency of Canada struck at the Royal Canadian Mint during the year 1953. George Edwards Cole, B.A., B.Sc.: to be a Commissioner to inquire into, review and report on the administration of Quartz Mining and Placer Mining in Yukon Territory, effective Apr. 21, 1954. *May 20,* Hon. W. F. A. Turgeon, Q.C., LL.D., a Member of the Queen's Privy Council for Canada: to be a Commissioner to inquire into the application and effects of agreed charges as may be authorized by the Board under Part IV of the Transport Act. *June 10,* James C. Grieve: to be a Member of the St. John's Harbour and Pilotage Commission, *vice* J. W. Allan, deceased. The Rt. Hon. James Lorimer Ilsley, Q.C., P.C., W. W. Buchanan, Guy Favreau, Q.C.: to be Commissioners under Part I of the Inquiries Act to examine into the operation of the Patent Act, the Industrial Design Act, the Copyright Act and other related legislation, The Rt. Hon. James Lorimer Ilsley, Q.C., P.C., to be Chief Commissioner. *July 1,* The following persons to be receivers of wrecks for certain districts in Newfoundland established for the purposes of Part VIII (Wrecks, Salvage and Investigations into Shipping Casualties) of the Canada Shipping Act: Victor Eugene Guy, Capt. Thomas Pardy, Dermot J. Lee, and Thomas P. Lawton. *Oct. 20,* The following persons to be Commissioners under the Inquiries Act to inquire into the nature and extent of the damage caused by the flood in and adjoining the Humber River Valley in Ontario: John B. Carswell, to be the representative of the Government of Canada; D. Bruce Shaw, to be representative of the Government of Ontario. *Oct. 28,* The following to be Commissioners *dedimus potestatem* to administer oaths: Hon. Charles Holland Locke, Hon. John Robert Cartwright, Hon. Joseph Honore Gerald Fauteux, and Hon. Charles Douglas Abbott, Puisne Judges of the Supreme Court of Canada; Hon. John Doherty Kearney, Hon. Alphonse Fournier, and Hon. William Pitt Potter, Puisne Judges of the Exchequer Court of Canada; Hon. Sir Albert Joseph Walsh, Chief Justice of the Supreme Court of Newfoundland; Hon. George Joseph Tweedy, a Judge of the Supreme Court of Judicature of Prince Edward Island; Hon. William Arthur Ives Anglin, Hon. George Frederick Gregory Bridges, and Hon. Clovis Thomas Richard, Judges of the Queen's Bench Division of the Supreme Court of New Brunswick; Hon. Ernest Bertrand, Hon. George Miller Hyde, and Hon. Gabriel Edouard Rinfret, Puisne Judges of the Court of Queen's Bench in and for the Province of Quebec; and Hon. William Bridges Scott, Associate Chief Justice of the Superior Court of the Province of Quebec; and Hon. Hector Joseph Damase Perrier, Hon. Arthur Ives Smith, Hon. François Caron, Hon. Leon Casgrain, Hon. André Demers, Hon. William Mitchell, Hon. George Swan Challies, Hon. Joseph Jean, Hon. Elphege Marier, Hon. Eugène Marquis, Hon. Edouard Tellier, Hon. Harry Batshaw, Hon. Fernand Leopold Choquette, Hon. Louis Joseph Wilfred Henri Drouin, Hon. Edmond Roger Brossard, Hon. Maurice Lalonde, Hon. Charles Edouard Ferland, Hon. Antoni Sylvain Garneau, Hon. Joseph Adrien Louis-Philippe Cliche, Hon. Cyrille Edmond Gérard Lacroix, Hon. Joseph Hormisdas Paul Ste. Marie, Hon. Joseph Alfred Dion, Hon. Marie Joseph Edouard Leon Lajoie, Hon. Joseph Paul André Montpetit, Hon. Claude Marie Jean Thibaudeau Prevost, Hon. Stuart Bowman Ralston, Hon. Gaston Clement Roger Desmarais, and Hon. Paul Emile Côté, Puisne Judges of the Superior Court of the Province of Quebec; Hon. John Wellington Pickup, Chief Justice of Ontario, and Hon. Colin William George Gibson, Hon. Frederick George MacKay, Hon. Robert I. Ferguson, Hon. Wishart Flett Spence, Hon. James Maurice King, Hon. Henry Aldous Aylen, Hon. Wilfred Judson, Hon. James Laidlaw McLennan, Hon. René Alexander Danis, Hon. Charles Douglas Stewart, and Hon. Eric Gelling Moorhouse, Judges of the Supreme Court of Ontario; Hon. Joseph Thomas Beaubien, a Judge of the Court of Appeal for Manitoba, and Hon. Arnold Munroe Campbell, Hon. Paul Guyot DuVal, Hon. Ralph Maybank, Hon. Samuel Freedman, and Hon. George Eric Tritschler, Judges of Her Majesty's Court of Queen's Bench for Manitoba; Hon. Arthur Thomas Procter and Hon. Edward Milton Culliton, Judges of the Court of Appeal for Saskatchewan; Hon. Stewart McKercher, Hon. Harold Francis Thomson, Hon. Roy T. Graham, and Hon. Clifford Sifton Davis, Judges of Her Majesty's Court of Queen's Bench for Saskatchewan; Hon. William Gordon Egbert, Hon. James Mitchell Cairns, and Hon. Ernest Brown Wilson, Judges of the Trial Division of the Supreme Court of Alberta; Hon. Norman William Whittaker, Hon. Herbert Spencer Wood, Hon. John Valentine Clyne, and Hon. Herbert William Davey, Judges of the Supreme Court of British Columbia; Hon. John Edward Gibben, Judge of the Territorial Court of the Yukon Territory and a Stipendiary Magistrate for the Northwest Territories. *Nov. 23,* The following persons to be receivers of wrecks for the following districts: Garland S. Patey for the district of Northern Arm to St. Leonard's, N'f'ld.; Archibald Bursey for the district of Nipper's Harbour to Cape John, N'f'ld.; Jeremiah S. Bonia for the district of Dog Head to

Shoal Bay Point, N'f'ld.; Cyril Bowdridge for the district of Grand Bruit inclusive to Burgeo inclusive, N'f'ld.; Chesley Reid for the district of Western Arm to Little Coney Arm, N'f'ld.; Thomas Young for the district of Cape La Hune exclusive to Mosquito inclusive, N'f'ld. *Dec. 8*, Arthur S. Brett: to be a Member of the Lewisporte Pilotage Commission, Lewisporte, N'f'ld., *vice* Guy P. Small, resigned.

PART IV.—FEDERAL LEGISLATION, 1953-54

This classified list of federal legislation has been compiled from the Statutes. Naturally, in summarizing material of this kind it is not always easy to convey the full implication of the legislation. The reader who is interested in any specific Act is, therefore, referred to the Statutes of Canada at the given volume and chapter.

Legislation of the First Session of the Twenty-Second Parliament, Nov. 12, 1953, to June 26, 1954

Subject, Chapter and Date of Assent	Synopsis
2-3 Eliz. II	
Banking—	
33 June 10	*An Act to amend the Bank of Canada Act* makes a number of changes in the administration, business and powers of the Bank of Canada. The major revision raises the minimum cash reserves which the chartered banks are required to maintain with the Bank of Canada from 5 p.c. to 8 p.c. of their total deposit liabilities and empowers the Bank of Canada to vary that reserve up to 12 p.c. provided sufficient notice is given of any increase and provided such increase be not more than 1 p.c. in any one month.
41 June 10	*The Quebec Savings Banks Act* renews for another 10 years the charter of the Montreal and District Savings Bank and of the Quebec Savings Bank.
48 June 26	*The Bank Act* is the decennial revision of the legislation respecting banks and banking; it renews the charters of the 11 chartered banks for a 10-year period from July 1, 1954. Among the amendments are those permitting the chartered banks to make loans on the security of insured mortgages and to make small loans on the security of household goods and chattels.
Communications—	
20 Mar. 4	*An Act to amend the Post Office Act* increases the rate of postage on letters posted in Canada for delivery in Canada.
22 Mar. 4	*An Act to amend the Telegraphs Act* authorizes the application of that part of the Act relating to marine electric telegraph companies to any company which, before Apr. 1, 1949, was empowered under the laws of Newfoundland to construct or maintain in Newfoundland waters submarine cables extending beyond the limits of Newfoundland.
31 May 27	*An Act to amend the Radio Act* makes the necessary revisions to permit the employment of United States personnel as radio operators on United States Government radio stations in Canada.
39 June 10	*An Act to amend the Post Office Act* permits a publisher to post newspapers or periodicals in postal areas other than the one in which such publications are printed and still take advantage of the low postal rates provided under the Act.
Constitution and Government—	
5 Dec. 16	*An Act respecting the Use of Election Material for By-elections and Northwest Territories Elections* authorizes, in order to avoid the unnecessary expense of printing new election material, the use of material already printed as required by the Canada Elections Act of 1938 to be used in any by-elections or Northwest Territories elections held before the next general election.
8 Feb. 16	*An Act to amend the Acts respecting the Northwest Territories*, among other revisions increases from three to four the number of elected members to the Council of the Northwest Territories. The Council now comprises nine members—four elected and five appointed by the Governor in Council.

Legislation of the First Session of the Twenty-Second Parliament, Nov. 12, 1953, to June 26, 1954—continued

Subject, Chapter and Date of Assent	Synopsis
Constitution and Government— concluded	
9 Feb. 16	*The Ontario-Manitoba Boundary Act, 1953,* declares as the true and unalterable boundary line between the Provinces of Ontario and Manitoba the boundary surveyed and marked on the ground by commissioners appointed for the purpose in 1897, 1921, 1929 and 1931; the legislatures of the respective provinces previously consented thereto.
10 Feb. 16	*An Act to amend the Senate and House of Commons Act* increases the salaries of the Speaker of the Senate, the Speaker of the House of Commons and the Deputy Speaker of the House of Commons; the sessional allowances of the Members of the Senate and of the House of Commons (from $4,000 to $8,000); and the annual allowances of the Leader of the Government in the Senate, the Leader of the Opposition in the Senate and the Leader of the Opposition in the House of Commons.
16 Mar. 4	*An Act to amend the Members of Parliament Retiring Allowances Act* deals with Members' contributions to the Consolidated Revenue Fund under the Retiring Allowances Act.
21 Mar. 4	*An Act to amend the Salaries Act* increases the annual salary of the Prime Minister from $15,000 to $25,000 and the annual salaries of Cabinet Ministers from $10,000 to $15,000.
32 May 27	*An Act to amend the Representation Act* corrects the description of a certain electoral district in Saskatchewan as printed in the Revised Statutes.
44 June 10	*An Act to amend certain Acts respecting the Superannuation of Government Employees transferred to Crown Corporations* provides that such employees transferring on or after Jan. 1, 1954, will, as of that date, or such date as a separate pension fund becomes established, cease to be a contributor under the Public Service Superannuation Act.
54 June 26	*The Diplomatic Immunities (Commonwealth Countries) Act* provides diplomatic and consular immunities from suit and legal processes as well as inviolability of residence, official premises and official archives for Commonwealth representatives in Canada.
64 June 26	*An Act to amend the Public Service Superannuation Act* provides death benefits up to a maximum of $5,000 for the spouse or the estate of a public servant or a member of the regular forces who participates in the plan through contribution as prescribed.
Finance—	
3 Dec. 16	*An Act to amend the Customs Act* adds a subsection to supplement and widen the law to provide a fair and reasonable basis of duty valuation when, as a result of advance of season or marketing period, domestic prices have declined below normal.
11 Feb. 16	*The United Kingdom Financial Agreement Act, 1954,* ratifies an agreement entered into by the Government of Canada and the Government of the United Kingdom regarding the repayment of the outstanding balance of the $700,000,000 interest-free loan extended in 1942; $38,000,000 of the $150,000,000 outstanding was to be paid by August 1954 and the balance in quarterly instalments until final redemption on Dec. 1, 1958.
24 Mar. 31	*Appropriation Act, No. 1, 1954,* grants certain sums of money to be paid out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1955.
25 Mar. 31	*Appropriation Act, No. 2, 1954,* grants certain sums of money to be paid out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1954.
29 May 27	*Appropriation Act, No. 3, 1954,* grants certain sums of money to be paid out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1955.
35 June 10	*An Act to amend the Excise Act* relates to duties on beer and malt liquor.
53 June 26	*An Act to amend the Customs Tariff* gives effect to budget resolutions.

Legislation of the First Session of the Twenty-Second Parliament, Nov. 12, 1953, to June 26, 1954—continued

Subject, Chapter and Date of Assent	Synopsis
Finance—concl.	
56 June 26	*An Act to amend the Excise Act* makes certain changes relating to calculation of sale price and duty paid value and gives effect to budget changes in rates of duty.
57 June 26	*An Act to amend the Income Tax Act* gives effect to budget resolutions.
67 June 26	*Appropriation Act, No. 4, 1954,* grants certain sums of money to be paid out of the Consolidated Revenue Fund for defraying stated expenses of the public service for the year ending Mar. 31, 1955.
Justice—	
38 June 10	*An Act to amend the Opium and Narcotic Drug Act* makes opium and certain of its derivatives available for legal (medical) purposes and increases penalties for the illegal possession of drugs and trafficking in them.
43 June 10	*An Act to amend the Royal Canadian Mounted Police Act* provides for the appointment of more than one Deputy Commissioner and for the payment of partial pension to certain members retired for inefficiency or misconduct.
51 June 26	*The Criminal Code* is hereby completely revised and consolidated.
52 June 26	*An Act to amend the Criminal Code (Race Meetings)* ensures that a racing association incorporated in one province will not be entitled to conduct race meetings with pari-mutuel betting on race tracks that it acquires in other provinces.
58 June 26	*An Act to amend the Judges Act* provides salary for one additional judge of the Court of Appeal for British Columbia and one additional judge of the Trial Division of the Supreme Court of Alberta.
National Defence and Veterans Affairs—	
2 Dec. 16	*An Act to amend the Children of War Dead (Education Assistance) Act* extends the benefits of the Act to certain children previously excluded.
13 Mar. 4	*The Canadian Forces Act, 1954,* amends five Acts related directly to national defence—the Defence Services Pension Act, the National Defence Act, the Visiting Forces (North Atlantic Treaty) Act, the Senate and House of Commons Act and the Canadian Forces Act, 1950.
16 June 10	*An Act to amend the War Service Grants Act* among other changes extends for a further five years the period of time during which veterans may use their re-establishment credits—the period is now 15 years from Jan. 1, 1945, or the date of discharge, whichever is the later.
62 June 26	*An Act to amend the Pension Act* allows for increased salaries for members of the Pension Commission and makes other revisions mainly concerning pensions to children; in those sections dealing with veterans under medical care, the stipulation "in hospital" is changed to "under treatment or care of the Department"; and certain dates for entitlement are advanced.
65 June 26	*The Veterans Benefit Act, 1954,* gives the statutory definition of "Canadian Forces" and sets forth the application of the following Acts to members of the Canadian Forces: the War Service Grants Act, the Veterans Rehabilitation Act, the Pension Act, the Veterans' Land Act, the Veterans Insurance Act, the Reinstatement in Civil Employment Act, the Veterans' Business and Professional Loan Act, the Civil Service Act, the Public Service Superannuation Act and the Unemployment Insurance Act.
66 June 26	*An Act to amend the Veterans' Land Act* extends the provisions of the Act to include financial and technical assistance to veterans who wish to build their own homes. It also provides for additional loans up to $3,000 for full-time farmers and $1,400 for part-time farmers or commercial fishermen already under contract for the purpose of permanently improving or increasing their holdings.

Legislation of the First Session of the Twenty-Second Parliament, Nov. 12, 1953, to June 26, 1954—continued

Subject, Chapter and Date of Assent	Synopsis
Northern Affairs and National Resources—	
4 Dec. 16	*The Department of Northern Affairs and National Resources Act* creates a new department of government with the specific duty of co-ordinating the activities of all government departments in the Yukon and Northwest Territories and of promoting measures for the further economic and political development of those areas as well as the development of knowledge of problems in the north and the means of dealing with them through scientific investigation and technological research. Other duties include jurisdiction over the forest and water resources of Canada; irrigation and water power; national parks and historic sites and monuments; archæology, ethnology and fauna and flora; and tourist services. The Department of Resources and Development Act is repealed.
6 Dec. 16	*An Act to amend the National Parks Act* makes certain changes to improve the administration of Canada's National Parks.
17 Mar. 4	*An Act to amend an Act respecting the National Battlefields at Quebec* authorizes the expenditure of $125,000 a year for four years for the purposes of the Act.
36 June 10	*An Act to amend the International Rapids Power Development Act* replaces a reference to the Power Commission Act of Ontario by the St. Lawrence Development Act, 1952, with respect to the expropriation of property.
Trade and Commerce—	
15 Mar. 4	*An Act to amend the Exports Credits Insurance Act* revises the financial structure of the Corporation by increasing the authorized capital from $5,000,000 to $15,000,000 and stipulating amounts to be credited to an underwriting reserve account.
19 Mar. 4	*An Act to amend the Patent Act* authorizes certain increases in statutory fees provided under the Act in order to ensure that services are paid for by those to whom they are rendered rather than by the taxpayers generally.
27 Mar. 31	*The Export and Import Permits Act* revises and consolidates the legislation with respect to the exporting and importing of strategic and other goods.
40 June 10	*The Public Servants Inventions Act* consolidates legislation formerly included in four different Acts concerning the ownership and management of and the payment of awards for inventions made by public servants of the Government of Canada that are connected with the duties and employment of the inventors.
Transportation—	
1 Dec. 16	*An Act respecting the appointment of Auditors for National Railways* appoints independent auditors for 1954 to make a continuous audit of the national railway accounts.
7 Dec. 16	*An Act to amend the Pipe Lines Act* brings under the authority of the Act the operation and construction of oil or gas pipe lines extending from one province to another.
30 May 27	*An Act to amend the Department of Transport Act* provides for the regulation and control of the bulk transport of such goods as grain, ores and minerals, ferrous metals, iron and steel scrap, pulpwood, sand, stone and gravel, etc., in order to ensure prompt, efficient and orderly movement.
37 June 10	*An Act to amend the Navigable Waters Protection Act* provides for recovery by the government of any costs incurred in marking, removing or destroying any wrecks or other obstruction to navigation from the owner or person responsible for the obstruction. The Act also authorizes the making of regulations concerning the employment of seamen aboard Canadian ships on the Great Lakes.
49 June 26	*An Act respecting the construction of lines of railway by the Canadian National Railway Company from St. Felicien to Chibougamau and from Chibougamau to Beattyville, all in the Province of Quebec, and from Hillsport on the main line of the Canadian National Railways to Manitouwadge Lake, both in the Province of Ontario.*
50 June 26	*The Canadian National Railways Financing and Guarantee Act, 1954*, provides moneys to meet certain capital expenditures of the CNR during the year 1954, including the building of a hotel at Montreal, and to authorize the guarantee by the Government of certain securities to be issued by the Company.
59 June 26	*The Motor Vehicle Transport Act* provides for the regulation, in agreement with provincial authorities, of interprovincial and international highway transport by provincial agencies having authority to control highway transport within the several provinces.

Legislation of the First Session of the Twenty-Second Parliament, Nov. 12, 1953, to June 26, 1954—concluded

Subject, Chapter and Date of Assent	Synopsis
Transportation— concluded	
60 June 26	*An Act to amend the National Harbours Board Act* makes a number of revisions in the regulations relating to the administration and operation of the national harbours.
63 June 26	*An Act to amend the Pipe Lines Act* provides that a liquidator or trustee or other personnel appointed in a similar capacity may act for a company authorized to construct or operate pipelines.
Welfare—	
45 June 10	*An Act to amend the Vocational Training Co-ordination Act* revises the Act of 1942 in the light of present-day requirements for defence and other purposes, including authority to enter into agreements with the provinces to provide assistance for rehabilitation training of disabled persons.
55 June 26	*The Disabled Persons Act* provides for a nation-wide system of allowances for totally and permanently disabled persons who are in need of assistance. The legislation authorizes the payment of $40 a month to such persons who are 18 years of age or over. The passing of enabling legislation is required on the part of each of the participating provinces and each province is given the option of designating by its own law a higher minimum age if desired.
61 June 26	*An Act to repeal the National Physical Fitness Act.* Although this Act is repealed, agreements already in effect under the Act will be carried out.
Miscellaneous—	
12 Mar. 4	*An Act to amend the Animal Contagious Diseases Act* removes the limits on compensation payable under the Act in respect of swine and sheep and provides for the payment of compensation on the basis of market value.
14 Mar. 4	*An Act to amend the Explosives Act* makes a number of changes to the Act which provides a measure of control in the manufacture, testing, storage and importation of explosives in the interests of public safety.
18 Mar. 4	*The Northwest Atlantic Fisheries Convention Act* gives the Government statutory authority to carry out the obligations assumed by Canada under the International Convention for the Northwest Atlantic Fisheries, signed at Washington on Feb. 8, 1949, and ratified on July 3, 1950, following approval by Parliament on Joint resolution of the Senate and the House of Commons.
23 Mar. 18	*The National Housing Act, 1954,* makes substantial changes in the financing of residential construction under the National Housing Act. The group of lending institutions is widened to include the chartered banks and the Quebec savings banks, which are empowered to make loans on the security of insured first mortgages on residential property. The former system of joint loans has been replaced by a system of insured mortgage loans. The down-payment is reduced from 20 p.c. to 10 p.c. on the first $8,000 of the mortgage value and the down-payment on portions in excess of $8,000 is placed at 30 p.c. Monthly payments are reduced by extending the life of the mortgage loans to 25 years from 20 years.
26 Mar. 31	*An Act to amend the Emergency Gold Mining Assistance Act* extends the application of the Act to the end of 1954 and increases the assistance with respect to gold produced in 1953 and 1954.
28 Mar. 31	*The Fire Losses Replacement Account Act* establishes a Fire Losses Replacement Account from which an advance may be made, up to a maximum of $5,000,000, for the restoration, rebuilding or repair of any property under the administration or control of a Government department or Crown corporation that has been lost, destroyed or damaged by fire.
34 June 10	*An Act to amend the Canadian Citizenship Act* enables a person to apply for Canadian citizenship without first giving, as previously required, at least one year's notice of his intention to do so.
42 June 10	*An Act to amend the Research Council Act* clarifies the position of the Council with respect to its authority to deal with personal property in the course of its operations and makes certain minor adjustments in connection with the powers of the Council.
47 June 26	*An Act to amend the Atomic Energy Control Act* provides for the incorporation of a holding company to integrate the research and production activities in the atomic energy field, the company to be responsible to Parliament through the Chairman of the Committee of the Privy Council on Scientific and Industrial Research. Obsolete references to the Civil Service Superannuation Act are eliminated.

PART V.—CANADIAN CHRONOLOGY, 1497-1954

Events in the General Chronology from 1497 to 1866 are given in the 1951 Year Book, pp. 46-49, and from 1867-1953 in the 1954 Year Book, pp. 1259-1264. References regarding federal or provincial elections or changes in legislatures or ministries are given in Chapter II on Constitution and Government and in Appendices.

1954. *Jan. 8-15*, The Conference of Commonwealth Finance Ministers was held in Sydney, Australia, to review developments in the economic field; Hon. D. C. Abbott, Minister of Finance, led the Canadian delegation. *Jan. 8*, The world's longest pipe-line flow of crude oil starting from Alberta reached Sarnia, Ont., a distance of 1,770 miles. *Jan. 23*, The U.N. Command in Korea freed 22,000 Korean prisoners-of-war who rejected communism. *Jan. 25-Feb. 18*, Great Britain, France and the Soviet Union met at a Foreign Ministers' Conference in Berlin, Germany, and considered a conference on Korea and Indo-China. *Feb. 4-Mar. 17*, Prime Minister St. Laurent made a round-the-world goodwill tour, visiting 11 countries including the Asian members of the Commonwealth. *Feb. 5*, Most northern group of Canada's Arctic islands named the Queen Elizabeth Islands. *Feb. 26-27*, Dag Hammarskjold, United Nations' Secretary-General, made an official visit to Ottawa, Ont., and received an honorary Doctor of Laws degree from Carleton College. *Mar. 30*, Canada's first subway train commenced operation in Toronto, Ont. *Apr. 1*, Woodside, the early home of former Prime Minister the Rt. Hon. W. L. Mackenzie King, at Kitchener, Ont., became a national historic park. *Apr. 8*, Worst air disaster in history of Trans-Canada Airlines when aircraft crashed at Moose Jaw, Sask., killing 37 persons. *Apr. 22-23*, National Conservation Conference of leaders of Canada's forest products industry held at Ottawa, Ont., urged greater co-operation in forestry conservation. *Apr. 23*, Meeting of the North Atlantic Council, attended by the foreign ministers of the 14-member countries of NATO, held in Paris, France. Canada was represented by Hon. L. B. Pearson, Secretary of State for External Affairs. *Apr. 26*, Hon. L. B. Pearson was leader of the Canadian delegation to the Far Eastern Conference for a peaceful settlement of the Korean question which opened in Geneva, Switzerland. *May 15*, Queen Elizabeth II and the Duke of Edinburgh arrived in London, England, ending a six-month tour of eastern Commonwealth countries. *May 31*, The Emergency Powers Act, giving the Parliament of Canada wide powers over the economy of Canada, expired. *May 31-June 11*, Canadian International Trade Fair, with exhibitors from 26 foreign countries, held at Toronto, Ont. *May 31*, First Prairie Province television station, CBWT Winnipeg, went on the air. *June 2*, In London, England, Dr. C. J. Mackenzie, President, Atomic Energy Control Board, received Kelvin Medal for distinguished service in field of scientific engineering and research. Second Canadian to receive this award. *June 3-7*, His Imperial Majesty Haile Selassie I, Emperor of Ethiopia, accompanied by his son, Prince Sahle Selassie, and grandaughter, Princess Sebla Desta, visited Canada. *June 5-27*, Unit tour across Canada made from Ottawa, Ont., by 20 journalists representing NATO countries—inspected defence installations, industrial projects and civic institutions, given opportunity to view Canadian way of life. *June 7*, United States Supreme Court handed down final decision to allow the Power Authority of State of New York to co-operate with The Hydro Electric Power Commission of Ontario on construction of the St. Lawrence River power project. *June 9*, Arrival of last return flight from Korea on Korean Airlift. *June 10-11*, Gen. Alfred M. Gruenther, Supreme Commander of the Allied Powers for Europe of the North Atlantic Treaty Organization (NATO), visited Ottawa. *June 21*, The new railway linking Sept Iles, Que., with the Quebec-Labrador iron-ore development began operation. *June 29-30*, Sir Winston Churchill, British Prime Minister, and Foreign Secretary, Anthony Eden visited Ottawa. *July 21*, The peace agreement for an Indo-China cease fire was signed in Geneva to end the Indo-China war. *July 27*, The war ended officially in northern Indo-China. *July 28*, Canada appointed to serve with India and Poland on Commission supervising Indo-China armistice of July 27. *July 29-Aug. 17*, The Duke of Edinburgh attended the British Empire Games in Vancouver, B.C., "tapped" the first aluminum ingot poured at Kitimat, B.C., toured northern Canada; left from St. John's, N'f'ld, aboard the Royal Yacht *Britannia*. *July 30*, Field Marshal Earl Alexander, former Governor General of Canada, opened the 5th British Empire Games in Vancouver, B.C. *July 31*, Ceremonial opening at Sept Iles, Que., of the new Quebec-Labrador iron-ore development presided over by Hon. Joseph Smallwood, Premier of Newfoundland, and Hon. Maurice L. Duplessis, Premier of Quebec. *Aug. 2*, First shipload of iron ore mined in the Quebec-Labrador field shipped from Sept Iles, Que., to Philadelphia, U.S.A. *Aug. 10*, First ground broken for the power project of the St. Lawrence River in international ceremonies at Cornwall, Ont., and Massena, N.Y. *Aug. 19*, The Rt. Hon. C. D. Howe, Minister of Trade and Commerce and Minister of Defence Production, named 1954 winner of the Daniel Guggenheim Medal, for his part in the development of Canadian aviation. *Aug. 22-Sept. 14*, The Duchess of Kent and her daughter Princess Alexandra arrived in Quebec City. *Aug. 30*, the Duchess officially opened a new generating station at Niagara Falls, Ont., adding 900,000 kw. to Ontario's electric power resources. *Sept. 21*, Eighth session of The General Assembly of the United Nations closed at New York and ninth session opened; Mr. Eelco N. Van Kleffens of The Netherlands, elected new President. *Sept. 27-28,* Mr. Shigeru Yoshida, Prime Minister of Japan, visited Ottawa. *Sept. 30,* Hon. Henry D. Hicks sworn in as Liberal Premier of Nova Scotia. *Sept. 28-Oct. 3,* Conference of nine nations, including Canada, met at London, England, to deal with important issues facing the Western World; Hon. L. B. Pearson represented Canada. The Nine-Power Conference agreed on a plan for West German re-armament. *Oct. 4-8,* Delegates from the 17 member nations of the Colombo Plan assembled in Ottawa for the fourth meeting of the Consultative Committee on Co-operative Economic Development in South and Southeast Asia, to review progress and future prospects and to discuss common problems and capital assistance for the under-developed areas of south and southeast Asia; Hon. Walter E. Harris, Canadian Minister of Finance, was Chairman of the Conference. *Oct. 15,* Eighty-two dead, one missing, damage $24,000,000 as aftermath of "Hurricane Hazel" and floods in the Humber River Valley and Holland Marsh, near Toronto, Ont. *Oct. 20,* Royal Commission, Mr. John B. Carswell, representing the Government of Canada, and Mr. D. Bruce Shaw, representing the Government of Ontario, appointed to inquire into the nature and extent of the damage caused by "Hurricane Hazel". *Oct. 23,* Hon. L. B. Pearson, Minister of External Affairs, signed at Paris on behalf of Canada, a Protocol to the North Atlantic Treaty, providing for the admission of the German Federal Republic into the western defence alliance, NATO. *Oct. 28,* RCMP patrol vessel *St. Roch* arrived at Vancouver on last voyage, was beached and transformed into an RCMP arctic museum. *Nov. 12-17,* Her Majesty Queen Elizabeth, the Queen Mother, visited Ottawa and Hull. *Nov. 14-17,* Mr. Pierre Mendes-France, Premier of France, and his wife, visited Quebec City and Ottawa. *Nov. 21,* HMCS *Labrador,* the first naval arctic patrol vessel of the Royal Canadian Navy to complete an 18,000-mile history-making voyage through the Northwest Passage and around North America via Panama Canal, arrived at Halifax, N.S. *Dec. 2-5,* Sir John Kotelawala, Prime Minister of Ceylon, made an official visit to Canada. *Dec. 6-8,* Mr. Julius Raab, Chancellor of Austria, made an official visit to Ottawa. *Dec. 10,* Canso Causeway 4,200 feet long, linking Cape Breton Island to the mainland of Nova Scotia, completed. *Dec. 17,* Ninth session of the General Assembly of the United Nations at New York ended. *Dec. 17-18,* NATO Council session held at Paris, France; Hon. Ralph O. Campney, Minister of Defence and Hon. L. B. Pearson, Minister of External Affairs, represented Canada. *Dec. 31,* 100 years ago Bytown became the City of Ottawa.

PART VI.—STATISTICAL SUMMARY OF THE PROGRESS OF CANADA, 1871-1953

In the following summary, the statistics of foreign trade, shipping, the Post Office, the public debt, revenue and expenditure, and the Post Office and Government savings banks relate to the fiscal years ended June 30 up to 1901; subsequently to years ended Mar. 31, except for trade, where calendar-year figures are given for 1931 and later years. Agriculture, dairying, mineral, manufacturing, banking, insurance, loan and trust companies, construction, road-transportation, vital, hospital, and immigration statistics relate to the calendar years, and railway and fisheries statistics to the years ended June 30, 1871-1911, and to the calendar years 1921-53. Canal statistics are those of the navigation seasons. Telegraph statistics relate to the fiscal years for Government lines and to the calendar years for other lines.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA

NOTE.—*The interpretation of the symbols used in the tables will be found facing p. 1 of this volume.*

	Item		1871	1881	1891	1901	1911	1921
	Population—[1]							
1	Newfoundland	No.	...	...	...	...	...	...
2	Prince Edward Island	"	94,021	108,891	109,078	103,259	93,728	88,615
3	Nova Scotia	"	387,800	440,572	450,396	459,574	492,338	523,837
4	New Brunswick	"	285,594	321,233	321,263	331,120	351,889	387,876
5	Quebec	"	1,191,516	1,359,027	1,488,535	1,648,898	2,005,776	2,360,510
6	Ontario	"	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,933,662
7	Manitoba	"	25,228	62,260	152,506	255,211	461,394	610,118
8	Saskatchewan	"	..	..	..	91,279	492,432	757,510
9	Alberta	"	..	..	..	73,022	374,295	588,454
10	British Columbia	"	36,247	49,459	98,173	178,657	392,480	524,582
11	Yukon Territory	"	..	..	..	27,219	8,512	4,157
12	Northwest Territories	"	48,000	56,446	98,967	20,129	6,507	8,143
	Canada	"	3,689,257	4,324,810	4,833,239	5,371,315	7,206,643	8,787,949[2]
13	**Households[3]**	No.	..	800,410	900,080	1,058,386	1,482,980	1,897,110
	Immigration—							
14	From United Kingdom	No.	..	17,033	22,042	11,810[5]	144,076	43,772
15	From United States	"	..	21,822	52,516	17,987[5]	112,028	23,888
16	From other countries	"	..	9,136	7,607	19,352[5]	75,184	24,068
	Totals	"	27,773	47,991	82,165	49,149[5]	331,288	91,728
	Vital Statistics—[3]							
17	Births (live)[6]	No.	..	..	..	..	..	..
	Rates per 1,000 population		..	..	..	..	..	..
18	Deaths, all causes[6]	No.	..	..	..	..	..	..
	Rates per 1,000 population		..	..	..	..	..	..
19	Marriages	No.	..	..	..	..	..	..
	Rates per 1,000 population		..	..	..	..	..	..
20	Divorces	No.	4	7	10	19	57	558
	Health and Welfare—							
	HOSPITALS—[7]							
	Public Hospitals—							
21	Hospitals	No.	..	..	..	..	..	..
22	Bed capacity[11]	"	..	..	..	..	..	..
23	Patient days[12]	"	..	..	..	..	..	..
24	Expenditure[13]	$	..	..	..	..	..	..
	Tuberculosis Sanatoria—							
25	Sanatoria	No.	..	..	..	..	..	..
26	Bed capacity	"	..	..	..	..	..	..
27	Patient days	"	..	..	..	..	..	..
28	Expenditure[13]	$	..	..	..	..	..	..
	Mental Institutions—							
29	Hospitals	No.	..	..	..	..	..	..
30	Bed capacity	"	..	..	..	..	..	..
31	Patient days	"	..	..	..	..	..	..
32	Expenditure[13]	$	..	..	..	..	..	..
33	FAMILY ALLOWANCES	$	..	..	..	..	..	..
34	OLD AGE PENSIONS[14]	$	..	..	..	..	..	..
35	PENSIONS FOR THE BLIND[14]	$	..	..	..	..	..	..
36	UNEMPLOYMENT INSURANCE[5,18]	$	..	..	..	..	..	..
	Criminal Statistics—[17]							
37	Convictions, indictable offences	No.	..	3,509[18]	3,974	5,638	12,627	19,396
38	Convictions, non-indictable offences	"	..	30,365[18]	33,643	36,510	100,633	157,777

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[1] The figures for 1949 and 1950 and those for 1952 and 1953 are intercensal estimates adjusted after the 1941 and 1951 Censuses, respectively. [2] Includes 485 members of the Royal Canadian Navy recorded separately. [3] Exclusive of the Territories. [4] Intercensal estimate—excludes households in institutions, hotels and camps. [5] Year ended Mar. 31. [8] By place of occurrence prior to 1941; by place of residence from 1941. [7] For reporting hospitals only; private and federal hospitals excluded. [8] Figures derived from 1931 Census report. [9] Exclusive of Newfoundland. [10] Includes Newfoundland. [11] Bassinets for newborn excluded.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

NOTE.—*The interpretation of the symbols used in the tables will be found facing p. 1 of this volume.*

1931	1939	1941	1949	1950	1951	1952	1953	
...	...	...	345,000	351,000	361,416	374,000	383,000	**1**
88,038	94,000[1]	95,047	94,000	96,000	98,429	103,000	106,000	**2**
512,846	561,000[1]	577,962	629,000	638,000	642,584	653,000	663,000	**3**
408,219	447,000[1]	457,401	508,000	512,000	515,697	526,000	536,000	**4**
2,874,662	3,230,000[1]	3,331,882	3,882,000	3,969,000	4,055,681	4,174,000	4,269,000	**5**
3,431,683	3,708,000[1]	3,787,655	4,378,000	4,471,000	4,597,542	4,766,000	4,897,000	**6**
700,139	726,000[1]	729,744	757,000	768,000	776,541	798,000	809,000	**7**
921,785	906,000[1]	895,992	832,000	833,000	831,728	843,000	861,000	**8**
731,605	786,000[1]	796,169	885,000	913,000	939,501	970,000	1,002,000	**9**
694,263	792,000[1]	817,861	1,113,000	1,137,000	1,165,210	1,198,000	1,230,000	**10**
4,230	5,000[1]	4,914	8,000	8,000	9,096	9,000	9,000	**11**
9,316	12,000[1]	12,028	16,000	16,000	16,004	16,000	16,000	**12**
10,376,786	11,267,000	11,506,655	13,447,000[1]	13,712,000[1]	14,009,429	14,430,000	14,781,000	
2,275,171	..	2,706,089	..	..	3,420,822	3,561,000[4]	3,675 000[4]	**13**
7,678	3,011	435	20,737	12,669	31,559	45,060	46,574	**14**
15,195	5,654	6,594	7,756	7,821	7,755	9,333	9,407	**15**
4,657	8,329	2,300	66,724	53,422	155,077	110,105	112,887	**16**
27,530	16,994	9,329	95,217	73,912	194,391	164,498	168,868	
240,473	229,468	255,317	366,139	371,071	380,101	402,527	416,825	**17**
23·2	20·4	22·2	27·1	27·1	27·2	27·9	28·2	
104,517	108,951	114,639	124,047	123,789	125,454	125,950	127,381	**18**
10·1	9·7	10·0	9·2	9·0	9·0	8·7	8·6	
66,591	103,658	121,842	123,877	124,845	128,230	128,301	130,837	**19**
6·4	9·2	10·6	9·2	9·1	9·2	8·9	8·9	
700	2,068	2,461	5,934	5,373	5,263	5,634	6,055	**20**
587[8]	609	613	738[9]	763[9]	778[9]	777[9]	810[10]	**21**
43,247[8]	51,628	53,445	61,676[9]	65,529[9]	68,674[9]	68,033[9]	62,223[10]	**22**
9,657,517[8]	11,923,695	13,393,506	17,813,015[9]	18,848,072[9]	19,798,448[9]	20,186,043[9]	23,750,013[10]	**23**
38,309,400[8]	..	..	146,866,796[9]	162,714,287[9]	196,203,373[9]	204,041,224[9]	235,512,500[10]	**24**
31[8]	47	47	60	62	64	62	60	**25**
6,044[8]	9,062	9,304	12,836	13,739	14,194	14,365	15,165	**26**
1,924,289[8]	3,055,910	3,227,640	4,307,083	4,370,008	4,640,217	4,808,365	5,160,391	**27**
5,329,393[8]	6,882,443	7,753,229	19,166,132	22,893,130	26,815,147	29,183,919	30,882,973	**28**
52[8]	53	54	59	61	63	66	75	**29**
29,283[8]	38,276	38,800	42,395	42,720	44,205	46,417	49,849	**30**
10,662,343[8]	15,478,080	16,078,250	18,774,505	19,223,090	19,708,905	20,540,200	23,540,602	**31**
13,235,767[8]	15,449,122	14,725,760	35,383,231	41,822,632	46,403,522	51,651,055	57,229,007	**32**
..	..	..	270,909,779	297,514,034	309,465,461	320,457,673	334,197,685	**33**
7,050,924	28,885,860	28,472,475	64,232,210[9]	89,652,203	99,268,006	76,066,835[15]	323,141,614	**34**
..	859,853	1,067,239	2,532,074[9]	3,536,730	3,901,109	721,449[15]	2,985,217	**35**
..	..	..	49,827,000[r]	85,824,000[r]	90,013,000[r]	90,164,000[r]	135,822,000	**36**
31,542	48,107	42,646	41,661[9]	42,624[9]	40,289	41,591	45,071	**37**
327,778	428,608	547,556	980,489[9]	1,183,991[9]	1,308,466	1,565,707	1,763,622	**38**

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[12] Days' stay of newborn excluded. [13] Not all hospitals shown above furnished financial reports. [14] Federal contribution only. [15] Three months ended Mar. 31, 1952, under new program. [16] Includes supplementary benefit payments from 1950. [17] Years ended Sept. 30 prior to 1950; 1950 and subsequently, years ended Dec. 31. Statistics for the 3-month period, Oct. 1 to Dec. 31, 1950, are not included in the data shown, the figures being: indictable offences, 7,907; non-indictable offences, 323,441. [18] 1886 figures; first year available.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Education—							
1	Total enrolment[1]	No.	803,000	891,000	993,000	1,092,633	1,361,205	1,880,805
2	Average daily attendance[2]	"	..	..	..	669,000	870,532	1,349,256
3	Teachers[2]	"	13,559	18,016	23,718	27,126	40,516	56,607
4	Public expenditure on	$	..	..	..	11,044,925	37,971,374	112,976,543
	Survey of Production—							
5	Net value[3]	$	..	..	..	..	..	..
	Agriculture—[4]							
6	Area of occupied farms	acre	36,046,401	45,358,141	58,997,995	63,422,338	108,968,715	140,887,903
7	Improved lands	"	17,335,818	21,899,181	27,729,852	30,166,033	48,733,823	70,769,548
8	Cash income from the sale of farm products	$'000	..	..	..	..	..	..
	FIELD CROPS—[7]							
9	Wheat	bu.	16,723,873	32,350,269	42,144,779	55,572,368	132,077,547	226,508,411
		$	16,993,265	38,820,323	31,667,529	36,122,039	104,816,825	374,178,601
10	Oats	bu.	42,489,453	70,493,131	83,428,202	151,497,407	245,393,425	364,989,218
		$	15,966,310	23,967,665	31,702,717	51,509,118	86,796,130	180,989,587
11	Barley	bu.	11,496,038	16,844,868	17,222,795	22,224,366	28,848,310	42,956,049
		$	8,170,735	11,791,408	8,611,397	8,889,746	14,653,697	33,514,070
12	Corn	bu.	3,802,830	9,025,142	10,711,380	25,875,919	14,417,599	10,822,278
		$	2,283,145	5,415,085	5,034,348	11,902,923	5,774,039	7,081,140
13	Potatoes	bu.	47,330,187	55,368,790	53,490,857	55,362,635	55,461,473	62,230,052
		$	15,211,774	13,288,510	21,396,342	13,840,658	27,426,765	44,635,547
14	Hay and clover	ton	3,818,641	5,055,810	7,693,733	6,943,715	10,406,367	8,829,915
		$	38,869,900	40,446,480	69,243,597	85,625,315	90,115,531	174,110,386
	Total Areas, Field Crops[9]	acre	..	..	15,662,811	19,763,740	30,556,168	47,553,418
	Total Values, Field Crops[9]	$	111,116,606	155,277,427	194,766,934	237,682,285	384,513,795	933,045,936
	LIVE STOCK AND POULTRY—[10]							
15	Horses	No.	836,700	1,059,400	1,470,600	1,577,500	2,599,000	3,451,800
		$	..	..	..	118,279,000	381,916,000	414,808,000
16	Milk cows	No.	1,251,200	1,595,800	1,857,100	2,408,700	2,645,200	3,086,700
		$	..	..	..	69,238,000	111,833,000	188,518,000
17	Other cattle	No.	1,373,100	1,919,200	2,263,500	3,167,800	3,880,900	5,282,800
		$	..	..	..	54,197,000	84,021,000	146,567,000
18	Sheep	No.	3,155,500	3,048,700	2,563,800	2,510,200	2,174,300	3,200,500
		$	..	..	..	10,491,000	10,702,000	20,675,000
19	Swine	No.	1,366,100	1,207,600	1,733,900	2,353,800	3,634,800	3,324,300
		$	..	..	..	16,446,000	26,987,000	35,869,000
20	All poultry	No.	..	..	14,105,100	17,922,700	31,793,300	37,185,800
		$	..	..	..	5,724,000	14,654,000	38,015,000
	Total Values	$	..	..	..	274,375,000	630,113,000	844,452,000
	DAIRYING—[11]							
21	Total milk production	'000 lb.	..	..	..	6,866,834	9,806,741	11,897,545
22	Cheese, factory[12]	lb.	..	54,574,856	97,418,855	220,833,269	199,904,205	162,117,000
		$	..	5,457,486	9,741,886	22,221,430	21,587,124	28,710,000
23	Butter, creamery	lb.	..	1,365,912	3,654,364	36,066,739	64,489,398	128,745,000
		$	..	341,478	913,591	7,240,972	15,597,807	48,135,000
24	Butter, dairy	lb.	..	102,545,169	111,577,210	105,343,076	137,110,200	107,379,000
		$	..	..	..	21,384,644	30,269,497	35,307,000
25	Other dairy products[13]	$	..	..	..	15,623,907	35,927,426	110,623,000
	Total Values, Dairy Products	$	..	22,743,939	30,315,214	66,470,953	103,381,854	222,775,000
	Forestry—							
26	Primary forest production	$	..	..	..	..	..	168,054,024
27	Lumber production	M ft. b.m.	..	..	..	..	4,918,202	2,869,307
		$	..	..	..	..	75,830,954	82,448,585
28	Total sawmill products	$	..	..	..	..	..	116,891,191
29	Pulp and paper products	$	..	..	..	..	..	151,003,165
30	Exports of wood, wood products and paper[14]	$	..	..	25,351,085	33,099,915	56,334,695	284,561,478

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[1] All types of educational institutions. [2] Provincially controlled ordinary and technical day schools. [3] Revised to reflect changes in data for the construction industry. [4] Exclusive of Newfoundland and the Territories. [5] Includes Newfoundland and the Territories. [6] Comparable figures not available. [7] Figures for the decennial census years 1871-1921 are for the immediately preceding years; those for 1871 are for the four original provinces only. [8] Cwt. [9] Includes other field crops, e.g., rye and flaxseed, not specified.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1949	1950	1951	1952	1953	
2,264,106	2,236,342	2,131,391	2,751,283^{r}	2,840,489^{r}	2,922,931^{r}	3,047,605	..	1
1,801,955	1,870,563	1,802,300	1,986,349^{r}	2,065,585^{r}	2,117,457^{r}	2,223,005	..	2
71,246	74,549	75,308	82,085^{r}	85,277^{r}	90,403^{r}	93,694	..	3
144,748,823	122,974,590	129,817,268	429,974,000^{r}	466,986,000^{r}	513,442,000	..	..	4
..	3,186,572,182	4,565,666,059	9,990,397,793	10,757,665,557	13,074,797,179	13,707,887,441	..	5
163,114,034	..	173,563,282	..	..	174,046,654[5]	..	..	6
85,732,172	..	91,636,065	..	..	96,852,826[5]	..	..	7
476,101	716,062	885,257^{r}	2,486,598	2,213,226	2,816,461^{r}	2,849,310^{r}	2,776,003	8
312,325,000	[6]	314,825,000	[6]	[6]	552,657,000	687,922,000	613,962,000	9
123,550,000	[6]	192,747,000	[6]	[6]	855,137,000	1,090,512,000^{r}	782,521,000	
328,278,000	[6]	305,575,000	[6]	[6]	488,191,000	466,805,000	406,960,000	10
77,970,000	[6]	125,920,000	[6]	[6]	369,296,000	309,477,000^{r}	253,910,000	
67,382,600	[6]	110,566,000	[6]	[6]	245,218,000	291,379,000	262,065,000	11
17,465,000	[6]	47,651,000	[6]	[6]	269,951,000	307,749,000^{r}	224,580,000	
5,449,000	[6]	13,362,000	[6]	[6]	15,915,000	19,722,000	20,854,000	12
2,274,000	[6]	9,645,000	[6]	[6]	28,527,000	28,403,000	28,199,000	
52,305,000[8]	[6]	39,052,000[8]	[6]	[6]	48,355,000	60,071,000^{r}	67,002,000	13
22,359,000	[6]	48,274,000	[6]	[6]	98,077,000	100,784,000^{r}	52,717,000	
14,539,600	[6]	12,632,000	[6]	[6]	19,484,000	19,083,000^{r}	19,650,000	14
110,110,000	[6]	158,723,000	[6]	[6]	297,238,000	271,687,000^{r}	269,489,000	
58,862,305	[6]	56,788,400	[6]	[6]	60,868,000	61,745,000^{r}	60,601,000	
435,966,400	[6]	704,761,000	[6]	[6]	2,120,301,000	2,306,397,000^{r}	1,771,098,000^{p}	
3,113,900	[6]	2,788,795	[6]	[6]	1,303,800	1,180,400	1,096,200	15
205,087,000	[6]	184,549,656	[6]	[6]	94,130,000	94,998,000	87,565,000	
3,371,900	[6]	3,626,025	[6]	[6]	2,903,800	2,968,000	3,146,200	16
160,655,000	[6]	191,214,008	[6]	[6]	722,589,000	624,160,000	531,043,000	
4,601,100	[6]	4,890,982	[6]	[6]	5,459,300	6,204,700	6,616,000	17
94,952,000	[6]	138,196,159	[6]	[6]	871,003,000	802,284,000	686,137,000	
3,627,100	[6]	2,839,948	[6]	[6]	1,461,200	1,588,200^{r}	1,721,300	18
19,680,000	[6]	17,038,647	[6]	[6]	38,439,000	35,314,000^{r}	33,883,000	
4,699,800	[6]	6,081,389	[6]	[6]	4,914,300	5,741,000	4,447,000	19
33,288,000	[6]	54,911,751	[6]	[6]	185,773,000	152,894,000	137,246,000	
65,468,000	[6]	63,526,202	[6]	[6]	67,857,000	65,782,000	66,451,000	20
45,138,000	[6]	27,444,115	[6]	[6]	86,943,000	80,932,000	82,764,000	
558,800,000	[6]	613,354,336	[6]	[6]	1,998,877,000	1,790,582,000^{r}	1,558,638,000	
14,339,686	[6]	16,549,902	[6]	15,322,350^{r}	15,309,971^{r}	15,734,603^{r}	16,424,800	21
113,956,639	[6]	151,866,000	[6]	102,710,000^{r}	94,314,000^{r}	73,668,000^{r}	81,660,000	22
12,824,695	[6]	24,737,037	[6]	30,737,000^{r}	33,527,000^{r}	22,782,000^{r}	25,337,000	
225,955,246	[6]	285,848,196	[6]	261,464,000^{r}	257,165,000	280,746,000^{r}	302,606,000	23
50,198,878	[6]	93,199,557	[6]	144,358,000^{r}	162,154,000	167,459,000^{r}	178,149,000	
98,590,000	[6]	82,796,000	[6]	27,352,000^{r}	26,830,000^{r}	23,769,000^{r}	21,289,000	24
20,098,000	[6]	24,373,000	[6]	14,714,000^{r}	16,159,000^{r}	13,924,000^{r}	12,392,000	
109,262,600	[6]	159,363,878	[6]	357,798,000^{r}	403,052,000^{r}	430,326,000^{r}	443,615,000	25
192,384,173	[6]	301,673,472	[6]	547,607,000^{r}	614,892,000^{r}	634,491,000^{r}	659,493,000	
141,123,930	157,747,398	213,163,089	561,412,062	625,734,603	782,525,015	815,651,194	..	26
2,497,553	3,976,882	4,941,084	5,915,443	6,553,898	6,948,697	6,807,594	7,057,532^{p}	27
45,977,843	78,331,839	129,287,703	334,789,873	422,480,700	507,650,241	483,195,323	520,565,860^{p}	
62,769,253	100,132,597	163,412,292	396,415,201	496,948,398	591,551,749	568,023,148	608,875,068^{p}	28
174,733,954	208,152,295	334,726,175	836,148,393	954,137,651	1,237,897,470	1,157,887,657	1,179,665,443	29
185,493,491	242,541,043	387,113,232	875,317,680	1,112,945,061	1,399,076,131	1,366,787,043	1,295,395,860	30

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[10] On farms only. [11] Figures for the decennial census years 1881-1921 are for the immediately preceding years. In the Censuses of 1881 and 1891 values only were given of factory butter and cheese; quantities have been calculated by reckoning cheese at 10 cents per lb. and butter at 25 cents per lb. [12] Data shown for 1949-53 represent cheddar and other cheese made from whole milk; prior to 1942 the figures included other cheese for Quebec only. [13] Prior to 1921 this item does not include skim milk and buttermilk. [14] Years ended Mar. 31 prior to 1931.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Mineral Production—							
1	Gold[1]	oz. t.	105,187	63,524	45,018	1,167,216	473,159	926,329
		$	2,174,412	1,313,153	930,614	24,128,503	9,781,077	19,148,920
2	Silver	oz. t.	..	355,083[2]	414,523	5,539,192	32,559,044	13,543,198
		$	..	347,271[2]	409,549	3,265,354	17,355,272	8,485,355
3	Copper	lb.	..	3,260,424[2]	9,529,401	37,827,019	55,648,011	47,620,820
		$	..	366,798[2]	1,226,703	6,096,581	6,886,998	5,953,555
4	Lead	lb.	..	204,800[2]	88,665	51,900,958	23,784,969	66,679,592
		$	..	9,216[2]	3,857	2,249,387	827,717	3,828,742
5	Zinc	lb.	..	..	..	788,000[3]	1,877,479	53,089,356
		$	..	..	..	36,011[3]	108,105	2,471,310
6	Nickel	lb.	..	830,477[4]	4,035,347	9,189,047	34,098,744	19,293,060
		$	..	498,286[4]	2,421,208	4,594,523	10,229,623	6,752,571
7	Coal	short ton	1,063,742[5]	1,537,106	3,577,749	6,486,325	11,323,388	15,057,493
		$	1,763,423[5]	2,688,621	7,019,425	12,699,243	26,467,646	72,451,656
8	Natural gas	M cu. ft.	..	..	..	..	..	14,077,601
		$	..	..	150,000[6]	339,476	1,917,678	4,594,164
9	Petroleum, crude	bbl.	..	368,987	755,298	622,392	291,092	187,541
		$	..	..	1,010,211	1,008,275	357,073	641,533
10	Asbestos	short ton	..	..	9,279	40,217	127,414	92,761
		$	..	..	999,878	1,259,759	2,943,108	4,906,230
11	Cement	bbl.	..	69,843[2]	93,479	450,394	5,692,915	5,752,885
		$	..	81,909[2]	108,561	660,030	7,644,537	14,195,143
	Totals, Mineral Production[7].	$	..	10,221,255[8]	18,976,616	65,797,911	103,220,994	171,923,342
	Water Power—							
12	Turbine installation	h.p.	..	..	71,219	238,902	1,363,134	2,754,157
	Central Electric Stations—							
13	Power houses	No.	..	..	80	58	266	510
14	Capital invested	$	..	..	4,113,771	11,891,025	110,838,746	484,669,451
15	Power generated	'000 kwh.	..	..	..	..	..	5,614,132
16	Customers	No.	..	..	..	..	..	973,212
	Fisheries—							
17	Marketed value of all products.	$	7,573,199	15,817,162	18,977,874	25,737,153	34,667,872	34,931,935
	Furs—							
18	Pelts taken[10]	No.	..	..	..	..	..	2,936,407
		$	..	..	..	..	..	10,151,594
19	Value of animals on fur farms..	$	..	..	..	..	..	5,977,545
	Manufactures—[11]							
20	Employees	No.	187,942	254,935	369,595	339,173	515,203	438,555
21	Capital	$	77,964,020	165,302,623	353,213,000	446,916,487	1,247,583,609	2,697,858,073
22	Salaries and wages	$	40,851,009	59,429,002	100,415,350	113,249,350	241,008,416	497,399,761
23	Values of materials used in....	$	124,907,846	179,918,593	250,759,292	266,527,858	601,509,018	1,365,292,885
	Products—							
24	Gross	$	221,617,773	309,676,068	469,847,886	481,053,375	1,165,975,639	2,488,987,148
25	Net[13]	$	96,709,927	129,757,475	219,088,594	214,525,517	564,466,621	1,123,694,263
26	**Index of Industrial Production**[14]...		..	..	..	..	..	..
	Construction—							
27	Values of contracts awarded...	$	..	..	..	..	345,425,000	240,133,300
	Labour—							
	Gainfully Occupied—[16,17]							
28	Agricultural occupations.....	No.	..	..	735,207[18]	716,860	933,735	1,035,283
29	Other primary "	"	..	..	58,211[20]	71,584[20]	139,877[21]	115,737[22]
30	Manufacturing "	"	..	..	237,972	299,535	372,234	406,677
31	Construction "	"	..	..	86,694	89,165	150,567	162,275
32	Transportation[23] "	"	..	..	61,310	82,483	158,926	199,568
33	Trade and finance "	"	..	..	88,064	99,552	221,805	293.334
34	Service "	"	..	..	203,897	236,205	322,895	420,173
35	Clerical "	"	..	..	24,121	58,789	106,351	217,937
36	Labourers[25] "	"	..	..	116,598	127,867	317,244	306,215
37	Not stated "	"	..	..	3,534	792	..	7,149
	Totals, Gainfully Occupied[17].	"	..	..	1,615,608	1,782,832	2,723,634	3,164,348
38	Wage-earners[17]	No.	..	..	..	..	1,628,273	1,972,089

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[1] As from 1932 the values include exchange equalization. [2] 1887. [3] 1898. [4] 1889. [5] 1874. [6] 1892. [7] Includes other items not specified. [8] 1886. [9] Excludes Newfoundland. [10] Years ended Sept. 30. [11] The statistics of manufactures in 1871, 1881 and 1891 include all establishments irrespective of the number of employees. From 1901, statistics are for establishments with five hands or over. The figures shown for census years prior to 1921 are for the preceding year. From 1922, statistics are exclusive of construction hand trades, repair and custom work. Figures for 1931-53 include non-ferrous metal smelting not included in earlier years. [12] Value of factory shipments. [13] Since 1924 the net value of production is computed by subtracting the cost of fuel and electricity as well as the cost of materials from the gross value of the products.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1949	1950	1951	1952	1953	
2,693,892	5,094,379	5,345,179	4,123,518	4,441,227	4,392,751	4,471,725	4,055,723	1
58,093,396	184,115,951	205,789,392	148,446,648	168,988,687	161,872,873	153,246,016	139,597,985	
20,562,247	23,163,629	21,754,408	17,641,493	23,221,431	23,125,825	25,222,227	28,299,335	2
6,141,943	9,378,490	8,323,454	13,098,808	18,767,561	21,865,467	21,065,603	23,774,271	
292,304,390	608,825,570	643,316,713	526,913,632	528,418,296	539,941,589	516,075,097	506,504,074	3
24,114,065	60,934,859	64,407,497	104,719,151	123,211,407	149,026,216	146,679,040	150,953,742	
267,342,482	388,569,550	460,167,005	319,549,865	331,394,128	316,462,751	337,683,891	387,411,588	4
7,260,183	12,313,768	15,470,815	50,488,879	47,886,452	58,229,146	54,671,021	50,076,822	
237,245,451	394,533,860	512,381,636	576,524,097	626,454,598	682,224,335	743,604,155	803,523,295	5
6,059,249	12,108,244	17,477,337	76,372,147	98,040,145	135,762,643	129,833,285	96,101,386	
65,666,320	226,105,856	282,258,235	257,379,216	247,317,867	275,806,272	281,117,072	287,385,777	6
15,267,453	50,920,305	68,656,795	99,173,289	112,104,685	151,269,994	151,349,438	160,430,098	
12,243,211	48,676,990	18,225,921	19,120,046	19,139,112	18,586,823	17,579,002	15,900,673	7
41,207,682	15,692,698	58,059,630	110,915,121	110,140,399	109,038,835	111,026,149	102,721,875	
25,874,723	35,185,146	43,495,353	60,457,177	67,822,230	79,460,667	88,686,465	100,985,923	8
9,026,754	12,507,307	12,665,116	11,620,302	6,433,041	7,158,920	9,517,638	10,877,017	
1,542,573	7,826,301	10,133,838	21,305,348	29,043,788	47,615,534	61,237,322	80,898,897	9
4,211,674	9,846,352	14,415,096	61,118,490	84,619,937	116,655,238	143,038,212	200,582,276	
164,296	364,472	477,846	574,906	875,344	973,198	929,339	911,226	10
4,812,886	15,859,212	21,468,840	39,746,072	65,854,568	81,584,345	89,254,913	86,052,895	
10,161,658	5,731,264	8,368,711	15,916,564	16,741,826	17,007,812	18,520,538	22,238,335	11
15,826,243	8,511,211	13,063,588	32,901,936	35,894,124	40,446,288	48,059,470	58,842,022	
230.434,726	474,602,059	560.241,290	901,110.026	1,045,450,073	1,245,483,595	1,285,342,353	1,336,303,503	
6,666,337	8,289,212	8.845,038	11,613,333	12,562,750	13,342,504	14,305,880	14.929,074	12
559	611	607	650	665	647	562	524	13
1,229,988,951	1,564,603,211	1,641,460,451	..	..	..	..	..	14
16,330,867	28,338,030	33,317,663	44,418,573	48,493,718	54,851,844	59,409,198	62,860,927	15
1,632,792	1,941,663	2,081,270	3,076,369	3,269,824	3,439,750	3,620,595	3,817,281	16
30,517,306	40,075,922	62,258,997	132,306,372	152,062,597[9]	175,718,088[9]	149,737,361[9]	150,226,738[9]	17
4,060,356	6,492,222	7,257,337	9,902,790	7,377,491[9]	7,479,272[9]	7,931,742	7,568,865	18
11,803,217	14,286,937	21,123,161	22,899,882	23,184,033[9]	31,134,400[9]	24,215,061	23,349,680	
8,497,237	6,920,464	7,928,971	8,743,225	10,444,286	10,195,561	9,560,702	10,835,709	19
528,640	658,114	961,178	1,171,207	1,183,297	1,258,375	1,288,382	1,327,451	20
3,705,701,893	3,647,024,449	4,905,503,966	..	..	..	..	..	21
587,566,990	737,811,153	1,264,862,643	2,591,890,657	2,771,267,435	3,276,280,917	3,637,620,160	3,957.018,348	22
1,221,911,982	1,836,159,375	3,296,547,019	6,843,231,064	7,538,534,532	9,074,526,353	9,146,172,494	9,380,558,682	23
2,555,126,448	3,474,783,528	6,076,308,124	12,479,593,300	13,817,526,381	16,392,187,132	16,982,687,035[12]	17,785,416,854[12]	24
1,252,017,248	1,531,051,901	2,605,119,788	5,330,566,434	5,942,058,229	6,940,946,783	7,443,533,199	7,993,069,351	25
[15]	109·7	164·8	199·6	211·5	226·5	232·9	248·4	26
315,482,000	187,178,500	393,991,300	1,143,547,300	1,525,764,700	2,295,499,200	1,812,177,600	2,017,060,700	27
1,127,682	..	1,083,816	..	..	826,759[19]	..	..	28
150,276	..	203,586	..	..	196,996[19]	..	..	29
495,842	..	709,181	..	..	973,982[19]	..	..	30
203,056	..	213,493	..	..	319,065[19]	..	..	31
289,030	..	311,645	..	..	492,986[19]	..	..	32
352,414	..	370,617	..	..	520,761[19]	..	..	33
616,953	..	725,456[24]	..	..	919,922[19]	..	..	34
258,684	..	314,051	..	..	541,713[19]	..	..	35
426,242	..	252,693	..	..	323,829[19]	..	..	36
1,654	..	11,413	..	..	63,600[19]	..	..	37
3,921,833	..	4,195,951[24]	..	..	5,179,613[19]	..	..	
2,570,097	..	2,816,798[24]	..	..	4,006,466[19]	..	..	38

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[14] 1935-39=100.

[15] Not comparable with later years.

[16] 10 years of age or over prior to 1911; 14 years of age or over after 1921.

[17] Exclusive of the Territories.

[18] Includes all farmers' sons, 14 years and over, whether or not reported with gainful occupation.

[19] Exclusive of Newfoundland with a labour force of 106,540 persons (78,658 wage-earners).

[20] Excludes Indians.

[21] Includes pulp-mill employees and almost all mine and smelter employees, except clerical workers.

[22] Excludes Indians on reserves.

[23] Includes "Communication".

[24] Exclusive of 314,584 persons on Active Service on June 2, 1941.

[25] Exclusive of labourers in agriculture, fishing, logging and mining.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Transportation—							
	STEAM RAILWAYS—							
1	Miles in operation.............	No.	2,695	7,194	13,838	18,140	25,400	39,191
2	Capital liability...............	$	257,035,188[1]	284,419,293	632,061,440	816,110,837	1,528,689,201	2,164,687,636
3	Passengers.....................	No.	5,190,416[2]	6,943,671	13,222,568	18,385,722	37,097,718	46,793,251
4	Freight........................	ton	5,670,836[2]	12,065,323	21,753,021	36,999,371	79,884,282	83,730,829[3]
5	Earnings......................	$	19,470,540[2]	27,987,509	48,192,099	72,898,749	188,733,494	458,008,891
6	Expenses......................	$	15,775,532[2]	20,121,418	34,960,449	50,368,726	131,033,785	422,581,205
	ELECTRIC RAILWAYS—							
7	Miles in operation.............	No.	..	..	..	553	1,224	1,687
8	Capital liability...............	$	..	..	..	..	111,532,347	177,187,436
9	Passengers.....................	No.	..	..	..	120,934,656	426,296,792	781,175,654
10	Freight........................	ton	..	..	..	287,926	2,496,072	2,282,292
11	Earnings......................	$	..	..	..	5,768,283	20,356,952	44,536,833
12	Expenses......................	$	..	..	..	3,435,163	12,096,134	35,945,316
	ROAD TRANSPORTATION—							
13	Highways, total milages[4].....	No.	..	..	..	..	..	..
14	Capital expenditure on[4]........	$	..	..	..	..	..	..
15	Motor-vehicles registered.....	No.	..	..	..	..	21,783	464,805
16	Total provincial revenue from licences and operation.......	$	..	..	..	..	..	..
	SHIPPING—							
17	Vessels on the registry........	No.	..	7,394	7,015	6,697	8,088	7,482
		ton	..	1,310,896	1,005,475	666,276	770,446	1,223,973
	International Sea-borne—[6,7]							
18	Entered.....................	ton	6,576,771	6,967,449	9,372,369	13,235,307	25,205,441	27,344,957
19	Cleared.....................	"	6,549,257	6,834,983	9,430,279	12,794,501	22,224,104	27,303,673
20	Totals....................	"	13,126,028	13,802,432	18,802,648	26,029,808	47,429,545	54,648,630
	Coastwise—[6]							
21	Entered.....................	ton	..	7,664,863	12,835,774	17,927,959	34,280,669	28,567,545
22	Cleared.....................	"	..	7,451,903	12,150,356	16,516,837	32,347,265	27,773,668
23	Totals....................	"	..	15,116,766	24,986,130	34,444,796	66,627,934	56,341,213
	CANALS—							
24	Passengers carried............	No.	100,377	118,136	146,336	190,428	304,904	230,129
25	Freight.......................	ton	3,955,621	2,853,230	2,902,526	5,665,259	38,030,353	9,407,021
	AIR TRANSPORTATION—[8]							
26	Miles flown...................	No.	..	..	..	..	..	294,449
27	Passenger miles...............	"	..	..	..	..	..	..
28	Freight carried...............	lb.	..	..	..	..	..	79,850
29	Mail carried..................	"	..	..	..	..	..	..
	Communications—							
30	Telegraphs, Govt., miles of line[9].........................	No.	..	1,947	2,699	5,744	8,446	11,207
31	Telegraphs, other, miles of line.	"	..	..	27,866	30,194	33,905	41,577
32	Telephones....................	"	..	..	..	63,192	302,759[10]	902,090
33	Telephones, employees[11].......	"	..	..	..	..	10,425[10]	19,943
34	Radio receiving licences.......	"	..	..	..	..	..	..
	Post Office—							
35	Revenue......................	$	803,637	1,344,970	2,515,824	3,421,192	9,146,952	26,331,119
36	Expenditure..................	$	994,876	1,876,658	3,161,676	3,837,376	7,954,223	24,661,262
37	Money orders issued...........	$	4,546,434	7,725,212	12,478,178	17,956,258	70,614,862	173,523,322
	Wholesale and Retail Trade—							
	Wholesale—							
38	Establishments...............	No.	..	..	..	..	..	..
39	Employees....................	"	..	..	..	..	..	..
40	Net sales....................	$	..	..	..	..	..	..
41	Retail—Stores.................	No.	..	..	..	..	..	..
42	Employees, full-time..........	"	..	..	..	..	..	..
43	Net sales....................	$	..	..	..	..	..	..

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[1] 1876. [2] 1875. [3] Duplication eliminated. [4] Fiscal years. [5] Excludes milage of unimproved road allowance not in use in Saskatchewan. [6] Fiscal years prior to 1941. [7] Includes sea-going and inland international. [8] Includes Atlantic and Pacific overseas services of Canadian carriers

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1949	1950	1951	1952	1953	
42,280	42,637	42,441	42,979[r]	42,978[r]	42,956	42,953	43,163	1
4,232,022,088	3,367,702,730	3,397,488,564	3,269,633,260	3,475,808,310	3,571,693,932	3,715,208,672	3,861,756,258	2
26,396,812	20,482,296	29,779,241	34,883,803	31,139,092	30,995,604	30,167,145	28,736,159	3
74,129,694[3]	84,631,122[3]	116,808,091[3]	142,719,431[3]	144,218,319[3]	161,260,521[3]	162,175,381[3]	156,249,259	4
358,549,382	367,179,095	538,291,947	894,397,264	958,985,751	1,088,583,789	1,172,158,665	1,205,935,414	5
321,025,588	304,373,285	403,733,542	831,456,446	833,726,562	977,577,062	1,057,186,304	1,100,393,836	6
1,379	1,083	1,028	719	663	595	568	552	7
215,818,096	204,581,406	193,532,914	171,370,207	186,444,978	199,411,550	153,516,177	186,117,922	8
720,468,361	632,533,152	795,170,569	1,240,558,812	1,186,570,685	1,165,120,371[r]	1,109,299,866	1,076,979,055	9
1,977,441	2,313,748	3,265,449	3,702,016	4,115,974	4,480,072	4,079,474	3,968,742	10
49,088,310	42,864,150	55,334,647	91,034,058	95,596,394	99,114,548	104,028,691	107,990,692	11
35,367,068	29,605,328	37,030,823	89,414,380	92,378,848	97,880,959	101,110,712	105,027,443	12
378,094	497,707	561,489	561,347	567,155	511,878[5, r]	512,795[5]	517,809	13
66,250,229	62,577,241	37,237,954	156,223,856	154,699,553	192,810,362	244,614,842	234,334,349	14
1,200,668	1,439,245	1,572,784	2,290,628	2,600,511[r]	2,872,420	3,155,824	3,430,672	15
42,231,027	79,915,560	91,139,300	196,040,170	222,332,113	252,213,001	278,004,926	307,664,164	16
8,966	8,419	8,667	14,102	14,816	15,292	15,815	16,181	17
1,484,423	1,287,365	1,271,811	1,832,393	1,665,697	1,659,351	1,731,064	1,694,715	
45,834,452	44,775,116	31,452,400	40,088,377	42,816,949	47,508,342	52,156,098	56,589,078	18
45,077,424	47,052,371	33,313,400	44,256,743	47,340,150	52,750,461	53,023,949	61,962,634	19
90,911,876	91,827,487	64,765,800	84,345,120	90,157,099	100,258,803	105,180,047	118,551,712	20
47,134,652	45,386,457	48,107,158	56,037,003	56,066,997	60,802,798	56,776,504	67,417,391	21
47,540,555	43,183,652	46,433,320	52,203,784	51,615,568	55,609,082	57,876,563	62,022,657	22
94,675,207	88,570,109	94,540,478	108,240,787	107,682,565	116,411,880	114,653,067	129,440,048	23
126,633	62,790	100,092	81,216	64,255	93,512	104,135	112,082	24
16,189,074	23,391,077	23,453,367	24,373,752	27,439,076	29,325,034	31,354,139	33,373,064	25
7,046,276	10,969,271	12,508,390	40,083,834[r]	44,470,174[r]	52,578,934[r]	58,775,340[r]	64,076,912	26
4,073,552	26,107,750	56,723,714	464,609,486[r]	550,534,058[r]	689,819,451[r]	805,642,141[r]	942,269,095	27
2,372,467	21,253,364	16,559,611	35,119,684[r]	44,586,726[r]	59,199,354[r]	135,055,106[r]	177,451,345	28
470,461	1,900,347	3,411,971	13,752,434[r]	14,501,110[r]	16,824,652[r]	18,328,310[r]	20,319,952	29
9,300	8,780	9,199	8,037	8,181	8,714	8,155	8,293	30
43,928	43,684	43,047	44,498	43,818	44,866	44,544	44,434	31
1,364,200	1,397,272	1,562,146	2,699,612	2,917,092	3,113,766	3,352,366	3,606,407	32
23,825	17,636	20,103	42,326	45,396	47,387	48,207	50,540	33
523,100	1,223,502	1,454,717	2,057,799	2,177,445	2,212,435	2,306,604	2,263,816	34
30,416,107	35,288,220	40,383,366	80,618,401	84,528,655	90,454,678	104,622,208	112,024,245	35
36,292,604	35,456,181	38,699,674	77,642,621	82,639,741	91,781,466	97,973,263	105,553,191	36
167,749,651	145,204,787	173,565,550	415,703,754	479,520,987	511,915,621	580,823,622[r]	623,266,884	37
13,140[12]	..	24,758	..	..	26,167	..	..	38
90,564[12]	..	117,471	..	..	178,658[13] 224,526[14]	.. ..	.. ..	39
3,325,210,300[12]	..	5,290,751,000	..	..	14,401,036,700	..	..	40
125,003[12]	..	137,331	..	..	151,626	..	..	41
238,683[12]	..	297,047	..	..	454,794[13] 603,891[14]	.. ..	.. ..	42
2,755,569,900[12]	2,447,658,000[15]	3,440,901,700	8,427,900,000[15]	9,467,400,000[15]	10,693,097,000	11,532,085,000[15]	12,125,802,000[15]	43

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from 1949. [9] Prior to 1941, Temiskaming and Northern Ontario Railway Commission excluded. [10] As at June 30. [11] Excludes rural lines in Saskatchewan. [12] Census figures for 1930. [13] Average minimum. [14] Average maximum. [15] Estimated on intercensal survey.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Wholesale and Retail Trade—concl.							
	Services—							
1	Establishments	No.	..	..	..	..	..	..
2	Employees, full-time	"	..	..	..	..	..	..
3	Receipts	$	..	..	..	..	..	..
4	**Commercial Failures**[5]	No.	..	..	1,861	1,341	1,332	2,451[6]
5	Liabilities	$	..	..	16,723,939	10,811,671	13,491,196	73,299,111[6]
	Foreign Trade—[7]							
6	Exports, domestic	$	57,630,024	83,944,701	88,671,738	177,431,386	274,316,553	1,189,163,701
7	Re-exports	$	9,853,244	13,375,117	8,798,631	17,077,757	15,683,657	21,264,418
8	Imports, for consumption	$	84,214,388	90,488,329	111,533,954	177,930,919	452,724,603	1,240,158,882
	Totals, Foreign Trade	$	151,697,656	187,808,147	209,004,323	372,440,062	742,724,813	2,450,587,001
9	Total exports to Commonwealth	$	25,346,019	45,980,062	47,137,203	100,748,097	148,967,442	403,452,219
10	Exports to United Kingdom	$	21,733,556	42,637,219	43,243,784	92,857,525	132,156,924	312,844,871
11	Total imports from Commonwealth	$	51,317,045	45,514,323	44,337,052	46,653,228	129,467,647	266,002,688
12	Imports from United Kingdom	$	48,498,202	42,885,142	42,018,943	42,820,334	109,934,753	213,973,562
13	Exports to United States	$	29,164,358	34,038,431	37,743,430	67,983,673	104,115,823	542,322,967
14	Imports from United States	$	27,185,586	36,338,701	52,033,477	107,377,906	275,824,265	856,176,820
15	Exports to other countries	$	3,119,647	3,926,208	3,791,105	8,699,616	21,233,288	243,388,515
16	Imports from other countries	$	5,711,757	8,635,305	15,163,425	23,899,785	47,432,691	117,979,374
	EXPORTS, DOMESTIC, BY CHIEF ITEMS—							
17	Wheat	bu.	1,748,977	2,523,673	2,108,216	9,739,758	45,802,115	129,215,157
		$	1,981,917	2,593,820	1,583,084	6,871,939	45,521,134	310,952,138
18	Wheat flour	bbl.	306,339	439,728	296,784	1,118,700	3,049,046	6,017,032
		$	1,609,609	2,173,108	1,388,578	4,015,226	13,854,790	66,520,490
19	Oats	bu.	542,386	2,926,532	260,569	8,155,063	5,431,662	14,321,048
		$	231,227	1,191,873	129,917	2,490,521	2,144,846	14,152,033
20	Barley	bu.	..	8,811,278	4,892,327	2,386,371	1,545,253	8,563,553
		$	..	6,261,383	2,929,873	1,123,055	831,195	11,469,050
21	Bacon, hams, shoulders and sides.	cwt.	103,444	103,547	75,542	1,055,495	598,745	982,338
		$	1,018,918	758,334	628,469	11,778,446	8,526,432	31,492,407
22	Beef and veal	cwt.	40,876	13,728	3,098	97,105	9,744	519,994
		$	241,366	83,738	16,051	813,343	91,884	8,331,298
23	Cheese	lb.	8,271,439	49,255,523	106,202,140	195,926,397	181,895,724	133,620,340
		$	1,109,906	5,510,443	9,508,800	20,696,951	20,739,507	37,146,722
24	Planks and boards	M ft.	829,550	652,621	775,793	735,695	1,127,723	1,604,463
		$	8,355,874	7,101,532	8,626,912	9,380,505	21,509,769	71,079,295
25	Wood-pulp	cwt.	..	..	..	..	6,588,655	14,363,006
		$	..	..	280,619	1,937,207	5,715,532	71,552,037
26	Newsprint	cwt.	..	..	..	..	..	15,112,586
		$	..	..	..	..	3,092,437	78,922,137
27	Farm implements	$	..	31,269	252,620	1,742,946	5,911,775	12,527,373
28	Copper	lb.	6,246,000	39,604,000	10,994,498	26,345,776	55,005,342	74,175,900
		$	120,121	150,412	505,196	2,659,261	5,575,033	12,748,082
29	Nickel	lb.	..	..	5,352,043	9,537,558	34,767,523	47,018,300
		$	..	..	240,499	958,365	3,842,332	9,405,291
30	Lead	cwt.	80	..	..	656,023	31,980	111,108
		$	208	..	163	2,517,084	100,933	525,656
31	Zinc	cwt.	..	..	..	..	..	176,975
		$	..	..	..	..	..	963,962
32	Asbestos	ton	..	..	7,022	26,715	69,829	191,299
		$	..	..	513,909	864,573	2,076,477	12,633,389
	EXPORTS, DOMESTIC—							
33	Vegetable products (except chemicals, fibres and wood)	$	..	..	13,742,557	25,541,567	84,368,425	482,140,444
34	Animals and their products (except chemicals and fibres)	$	..	..	36,399,140	68,465,332	69,693,263	188,359,937
35	Fibres, textiles and textile products	$	..	..	872,628	1,880,539	1,818,931	18,783,884
36	Wood, wood products and paper	$	..	..	25,351,085	33,099,915	56,334,695	284,561,478
37	Iron and its products	$	..	..	556,527	3,778,897	9,884,346	76,500,741
38	Non-ferrous metals and their products	$	..	..	1,618,955	33,395,096	34,000,996	45,939,377
39	Non-metallic minerals and their products (except chemicals)	$	..	..	3,988,584	7,356,444	10,038,493	40,345,345
40	Chemicals and allied products.	$	..	..	851,211	791,855	3,088,840	20,142,826
41	All other commodities	$	..	..	5,291,051	3,121,741	5,088,564	32,389,669
	Totals, Exports, Domestic	$	57,630,024	83,944,701	88,671,738	177,431,386	274,316,553	1,189,163,701

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[1] Census figures for 1930. [2] Figures include 5,542 hotels with 46,556 average minimum and 64,062 average maximum full-time employees and with receipts of $348,401,100. [3] Average minimum. [4] Average

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1949	1950	1951	1952	1953	
42,223[1]	..	49,271	..	..	58,748[2]	..	..	1
55,257[1]	..	62,781	..	..	143,800[2,3] 190,048[2,4]	.. ..	.. ..	2
249,455,900[1]	..	254,678,000	..	..	1,085,757,900	..	..	3
2,563[6]	1,299	882	596	717	797	843	1,039	4
52,987,554[6]	11,635,000	6,959,000	17,279,000	15,392,000	19,048,000	19,823,000	30,304,000	5
587,653,440	924,926,104	1,621,003,175	2,992,960,978	3,118,386,551	3,914,460,376	4,301,080,679	4,117,405,882	6
11,907,020	10,995,609	19,451,366	29,491.856	38,686,122	48,923,939	54,878,985	55,195,233	7
628,098,386	751,055,534	1,448,791,650	2,761,207,241	3,174,253,138	4,084,856,478	4,030,467,653	4,382,830,430	8
1,227,658,846	1,686,977,247	3,089,246,191	5,783,660,075	6,331,325,811	8,048,240,793	8,386,427,317	8,555,431,545	
219,781,406	430,806,546	878,640,907	1,015,022,448	655,089,381	872,407,020	1,007,532,782	897,584,820	9
170,597,455	328,099,242	658,228,354	704,955,726	469,910,011	631,460,954	745,845,393	665,232,009	10
151,999,922	188,900,276	359,942,070	494,228,816	645,624,296	727,088,882	544,461,565	623,962,364	11
109,468,081	114,007,409	219,418,957	307,449,800	404,213,449	420,984,515	359,757,123	453,391,388	12
240,196,849	380,392,047	599,713,463	1,503,458,711	2,020,987,630	2,297,674,594	2,306,954,938	2,418,914,783	13
393,775,289	496,898,466	1,004,498,152	1,951,860,065	2,130,475,929	2,812,927,298	2,976,962,332	3,221,214,416	14
127,675,185	113,727,511	142,648,805	474,479,819	442,309,540	744,378,762	986,592,959	800,906,279	15
82,323,175	65,256,792	84,351,428	315,118,360	398,152,913	544,840,298	509,053,756	537,653,650	16
194,825,612	162,904,586	196,646,340	210,384,483	162,993,750	237,060,505	336,023,883	290,073,264	17
117,871,254	109,050,542	161,856,075	435,158,365	325,613,570	441,042,753	621,292,402	567,906,882	
5,697,224	5,342,172	11,439,191	9,698,024	10,095,002	12,078,671	13,246,269	11,144,214	18
20,207,319	16,378,301	44,807,353	97,693,325	93,838,590	113,854,397	116,054,531	102,160,443	
11,177,072	12,115,598	7,691,664	22,628,271	18,079,576	59,272,650	80,938,416	80,392,982	19
3,767,918	4,142,375	3,295,148	18,532,774	16,571,166	53,898,508	68,239,757	60,402,612	
24,259,755	16,794,866	3,208,764	17,306,100	15,052,045	43,906,154	102,713,061	109,372,478	20
9,923,520	7,881,541	1,958,708	25,471,783	23,442,235	58,822,218	145,683,686	136,729,411	
127,752	1,878,251	4,646,140	670,866	785,267	61,325	35,393	70,274	21
2,035,382	32,656,049	77,494,498	24,175,917	28,306,976	3,649,744	2,502,016	5,508,128	
36,893	38,732	62,345	1,001,802	840,110	934,203	668,463	255,230	22
429,938	518,097	996,057	30,629,393	34,219,275	50,965,329	30,322,806	9,267,498	
84,788,400	90,944,800	92,331,000	52,694,800	63,109,600	30,653,200	2,094,900	16,429,400	23
10,594,917	12,248,650	13,554,911	16,256,818	16,551,508	10,231,725	879,546	4,518,175	
937,733	2,113,160	2,282,139	2,180,697	3,575,322	3,435,510	3,328,563	3,364,762	24
20,116,020	48,829,466	74,205,325	160,420,017	290,846,700	312,198,092	295,948,736	282,102,515	
12,450,741	14,110,308	28,234,485	30,974,122	36,922,864	44,866,161	38,811,599	39,003,018	25
30,056,643	31,000,602	85,897,736	170,675,310	208,555,549	365,132,884	291,863,498	248,674,880	
40,164,815	53,174,453	65,240,248	94,093,031	98,761,380	102,241,224	106,548,605	107,505,019	26
107,233,112	115,687,288	154,356,543	433,881,585	485,746,314	536,372,498	591,790,209	619,033,394	
2,888,757	6,974,684	30,972,047	92,527,276	87,811,385	106,438,161	95,692,148	74,316,318	27
196,789,100	549,919,700	430,087,100	397,577,600	376,077,400	304,193,100	336,950,200	399,136,000	28
17,064,860	52,396,086	40,951,367	84,052,256	82,990,177	81,691,243	100,805,833	117,351,091	
63,528,600	234,781,300	275,190,300	254,283,500	243,302,300	262,365,600	284,044,500	290,235,500	29
14,181,565	57,933,511	67,679,708	92,323,686	105,299,743	136,689,457	150,981,762	162,542,304	
2,208,475	3,696,759	3,818,025	2,706,620	2,724,762	2,536,110	3,178,412	3,301,694	30
4,659,776	9,850,076	13,525,301	41,884,902	38,104,940	45,290,081	49,675,775	37,835,399	
2,391,111	3,571,682	3,987,516	5,620,307	5,630,521	6,104,710	7,044,887	7,104,554	31
5,564,529	9,922,232	12,278,377	55,699,669	58,709,957	83,668,834	96,283,451	57,571,593	
159,438	346,018	453,909	534,990	829,979	942,314	902,058	878,530	32
5,174,643	15,365,288	19,410,596	36,933,742	62,751,504	80,332,831	86,509,548	84,557,404	
209,760,786	220,118,056	285,708,739	773,006,888	636,897,823	894,209,730	1,183,496,418	1,096,762,974	33
70,938,351	131,803,706	201,730,555	338,421,481	365,775,038	348,033,470	237,941,527	250,918,980	34
5,394,084	14,427,669	30,819,633	25,217,322	29,573,450	36,858,344	27,696,811	24,333,213	35
185,493,491	242,541,043	387,113,232	875,317,680	1,112,945,061	1,399,076,131	1,366,787,043	1,295,395,860	36
19,086,492	63,102,432	239,900,848	292,864,223	251,108,538	342,298,703	406,946,039	358,438,052	37
56,158,939	182,890,103	244,012,336	426,607,610	457,262,306	569,870,193	706,732,321	682,183,153	38
14,976,873	29,332,099	45,172,085	73,710,209	103,654,760	131,529,446	143,473,767	147,393,122	39
10,848,946	24,263,342	58,676,338	70,697,937	100,525,482	131,689,729	124,565,264	137,885,215	40
14,995,478	16,447,654	127,869,409	117,117,628	60,644,093	60,894,630	103,441,489	124,095,313	41
587,653,440	924,926,104	1,621,003,175	2,992,960,978	3,118,386,551	3,914,460,376	4,301,080,679	4,117,405,882	

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maximum. [5] Dun and Bradstreet figures. [6] Includes Newfoundland. [7] Fiscal years prior to 1931.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

	Item		1871	1881	1891	1901	1911	1921
	Foreign Trade—concluded							
	IMPORTS FOR CONSUMPTION—							
1	Vegetable products (except chemicals, fibres and wood)..	$	..	..	24,212,140	38,036,146	79,214,041	259,431,110
2	Animals and their products (except chemicals and fibres).	$	..	..	8,080,862	14,022,896	30,671,908	61,722,390
3	Fibres, textiles and textile products........................	$	..	..	28,670,141	37,284,752	87,916,282	243,608,342
4	Wood, wood products and paper	$	..	..	5,203,490	8,196,901	26,851,936	57,449,384
5	Iron and its products..........	$	..	..	15,142,615	29,955,936	91,968,180	245,625,703
6	Non-ferrous metals and their products....................	$	..	..	3,810,626	7,167,318	27,579,572	55,651,319
7	Non-metallic minerals and their products (except chemicals)..	$	..	..	14,139,024	21,255,403	53,430,475	206,095,113
8	Chemicals and allied products.	$	..	..	3,697,810	5,684,999	12,471,730	37,887,449
9	All other commodities........	$	..	..	8,577,246	16,326,568	42,620,479	72,688,072
	Totals, Imports............	$	84,214,388	90,488,329	111,533,954	177,930,919	452,724,603	1,240,158,882
	Prices—							
10	Wholesale indexes (1935-39=100)....		81·3	72·4	67·1	63·7	81·1	143·4
11	Consumer price index (1949=100)...		..	..	..	..	..	80·9
	Federal Finance—[1]							
12	Customs revenue..............	$	11,841,105	18,406,092	23,305,218	28,293,930	71,838,089	163,266,804
13	Excise revenue................	$	4,295,945	5,343,022	6,914,850	10,318,266	16,869,837	37,118,367
14	Income tax....................	$	..	..	..	..	..	46,381,824
15	Sales tax (net)...............	$	..	..	..	..	..	38,114,539
16	Total receipts from taxation...	$	16,320,369	23,942,139	30,220,068	38,612,196	88,707,926	368,770,498
17	Per capita receipts from taxes..	$	4·50	5·63	6·32	7·28	12·69	43·10
18	Total revenue.................	$	19,335,561	29,635,298	38,579,311	52,514,701	117,780,409	436,292,185
19	Revenue per capita............	$	5·34	6·96	8·07	9·91	16·87	50·99
20	Total expenditure.............	$	19,293,478	33,796,643	40,793,208	57,982,866	122,861,250	528,302,513
21	Expenditure per capita........	$	5·32	7·94	8·54	10·94	17·58	61·75
22	Gross debt....................	$	115,492,683	199,861,537	289,899,230	354,732,433	474,941,487	2,902,482,117
23	Assets........................	$	37,786,165	44,465,757	52,090,199	86,252,429	134,899,435	561,603,133[3]
24	Net debt......................	$	77,706,518	155,395,780	237,809,031	268,480,004	340,042,052	2,340,878,984
	Provincial Finance—[1]							
25	Gross ordinary revenue.......	$	5,518,946	7,858,698	10,693,815	14,074,991	40,706,948	102,030,458
26	Gross ordinary expenditure....	$	4,935,008	8,119,701	11,628,353	14,146,059	38,144,511	102,569,515
	National Accounts—							
27	National income...........	$'000,000	..	..	..	..	..	..
	Note Circulation—							
28	Chartered bank notes.........	$	20,914,637	28,516,692	33,061,042	50,601,205	89,982,223	194,621,710
29	Bank of Canada and other notes[6]......................	$	7,244,341	14,539,795	16,176,316	27,898,509	99,308,945	271,531,162
	Chartered Banks—							
30	Capital, paid-up..............	$	37,095,340	59,534,977	60,700,697	67,035,615	103,009,256	129,096,339
31	Assets........................	$	125,273,631	200,613,879	269,307,032	531,829,324	1,303,131,260	2,841,782,079
32	Liabilities to the public.......	$	80,250,974	127,176,249	187,332,325	420,003,743	1,097,661,393	2,556,454,190
33	Deposits payable on demand..	$	..	..	..	95,169,631	304,801,755	551,914,643
34	Deposits payable after notice..	$	..	..	..	221,624,664	568,976,209	1,289,347,063
35	Totals, deposits[6,7].............	$	56,287,391	94,346,481	148,396,968	349,573,327	980,433,788	2,264,586,736
36	Cheque payments.............	$,000	..	..	..	..	..	27,157,474[8]
	Savings Banks—							
37	Deposits in Post Office........	$	2,497,260	6,208,227	21,738,648	39,950,813	43,330,579	29,010,619
38	Deposits in Government banks.	$	2,072,037	9,628,445	17,661,378	16,098,146	14,673,752	10,150,189
39	Deposits in special banks......	$	5,766,712	7,685,888	10,982,232	19,125,097	34,770,386	58,576,775
	Loan Companies (Federal)—							
40	Assets........................	$	8,392,464	73,906,638	125,041,146	158,523,307	389,701,988	96,698,810
41	Liabilities...................	$	8,392,958	71,965,017	123,915,704	158,523,307	389,701,988	95,281,122
	Loan Companies (Provincial)—							
42	Assets........................	$	..	..	..	..	..	86,144,153[9]
43	Liabilities...................	$	..	..	..	..	..	87,385,807[9]

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[1] Unless otherwise stated, figures are for fiscal years ended within years given.
[2] Not comparable with previous years as excludes refunds applicable to other excise duties.
[3] Active assets only.
[4] Fiscal year ended nearest Dec. 31 of the year stated.
[5] In January 1950, the chartered banks' liability for such of

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—continued

1931	1939	1941	1949	1950	1951	1952	1953	
134,433,268	127,835,146	171,835,408	377,392,843	484,475,331	542,641,169	489,192,378	488,368,143	**1**
28,629,914	32,757,666	34,845,584	74,096,446	86,967,642	125,562,023	85,539,869	88,226,650	**2**
90,151,516	100,866,078	161,138,512	333,031,836	364,508,831	483,520,382	359,440,017	387,114,926	**3**
34,923,391	33,703,149	36,739,071	86,326,584	100,365,624	137,046,510	134,553,621	160,951,215	**4**
116,209,368	183,159,650	431,622,365	891,551,452	980,229,068	1,332,251,363	1,406,626,898	1,531,555,583	**5**
38,666,648	42,108,374	94,758,269	174,691,723	215,526,566	290,848,483	296,875,244	364,571,341	**6**
106,087,909	132,823,892	189,953,788	535,328,513	611,741,427	684,535,336	641,884,695	658,475,580	**7**
31,336,994	43,705,905	65,382,196	130,660,078	158,221,055	191,812,947	187,713,077	221,834,245	**8**
47,659,378	54,095,674	262,516,457	158,127,766	172,217,594	296,638,265	428,641,854	481,732,747	**9**
628,098,386	751,055,534	1,448,791,650	2,761,207,241	3,174,253,138	4,084,856,478	4,030,467,653	4,382,830,430	
94·0	99·2	116·4	198·3	211·2	240·2	226·0	220·7	**10**
67·9	63·2	69·6	100·0	102·9	113·7	116·5	115·5	**11**
131,208,955	78,751,111	130,757,011	222,975,471	225,877,683	295,721,750	346,364,563	389,442,109	**12**
57,746,808	51,313,658	88,607,559	204,651,969	220,564,504	241,046,174	217,939,983	241,360,370	**13**
71,048,022	142,026,138	248,143,022	1,297,999,404	1,272,650,191	1,513,135,510	2,161,373,408	2,473,790,089	**14**
20,783,944	122,139,067	179,701,224	377,302,763	403,437,159	460,120,405	573,470,562	566,233,167[2]	**15**
296,276,396	435,706,794	778,175,450	2,436,142,276	2,323,117,079	2,785,349,899	3,657,775,082	3,997,592,937	**16**
29·02	39·12	68·37	189·98	172·76	203·13	261·10	277·03	**17**
356,160,876	502,171,354	872,169,645	2,771,395,075	2,580,140,615	3,112,535,948	3,980,908,652	4,360,822,789	**18**
35·04	45·03	76·63	216·13	191·87	226·99	284·17	302·21	**19**
440,008,855	553,063,098	1,249,601,446	2,175,892,334	2,448,615,662	2,901,241,698	3,732,875,250	4,337,275,512	**20**
43·26	49·60	109·80	169·68	182·09	211·58	266·46	300·57	**21**
2,610,265,699	3,638,320,816	5,018,928,037	16,950,403,796	16,750,756,246	16,923,307,028	17,521,625,531	17,918,490,812	**22**
348,653,762[3]	485,761,502[3]	1,370,236,588[3]	5,174,269,644[3]	5,106,147,047[3]	5,489,992,080[3]	6,336,343,985[3]	6,756,756,543[3]	**23**
2,261,611,937	3,152,559,314	3,648,691,449	11,776,134,152	11,644,609,199	11,433,314,948	11,185,281,546	11,161,734,269	**24**
179,143,480	296,836,927	404,791,000[4]	998,127,000[4]	1,139,026,000[4,r]	1,241,249,000[4,r]	1,369,183,000[4]	..	**25**
190,754,202	289,467,574	349,818,000[4]	935,814,000[4]	1,040,871,000[4,r]	1,132,891,000[4,r]	1,207,475,000[4]	..	**26**
3,333	4,373	6,563	13,194	14,550	17,138	18,221[r]	19,043	**27**
128,881,241	88,820,636	78,761,049	14,731,992	[5]	[5]	[5]	[5]	**28**
153,079,362	184,904,919	406,433,409	1,267,520,386	1,293,238,910	1,360,679,422	1,446,587,418[r]	1,530,102,146	**29**
144,674,853	145,500,000	145,500,000	145,500,000	145,500,000	146,502,115	148,522,618	149,954,371	**30**
3,066,018,472	3,591,564,586	4,008,381,256	8,657,764,277	9,015,109,852	9,384,800,263	9,760,480,522	10,334,778,308	**31**
2,741,554,219	3,298,351,099	3,711,870,680	8,310,215,001	8,660,173,804	9,019,780,755	9,384,111,788	9,945,599,866	**32**
578,604,394	741,733,241	1,088,198,370	2,353,033,907	2,562,813,591	2,711,524,845	2,931,558,298	3,081,380,359	**33**
1,437,976,832	1,699,224,304	1,616,129,007	4,333,888,999	4,547,880,387	4,592,929,318	4,811,471,906	5,098,833,001	**34**
2,422,834,828	3,060,859,111	3,464,781,844	7,921,694,763	8,220,886,332	8,464,510,837	8,899,236,252	9,482,574,676	**35**
31,586,468	31,617,352	39,242,957	87,554,363	100,635,459	112,184,633	125,196,894	137,416,847	**36**
24,750,227	23,045,576	22,176,633	37,741,389	38,754,634	37,661,921	38,031,232	39,322,230	**37** **38**
69,820,422	81,566,754	76,391,775	184,250,615	192,567,275	193,982,871	200,342,385	214,122,001	**39**
147,094,183	136,358,786	130,795,391	179,795,977	190,733,017	203,103,850	206,973,153	217,019,970	**40**
146,046,087	136,351,602	130,787,116	144,414,068	152,825,544	165,768,886	175,107,452	184,448,041	**41**
65,728,238	58,526,904	58,220,073	80,207,903	89,504,876	88,991,635	96,333,209	106,571,244	**42**
66,387,987	58,533,671	58,220,073	51,546,444	59,893,359	63,699,805	70,406,200	78,117,467	**43**

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their notes as then remained outstanding was transferred to the Bank of Canada. [6] As at June 30 from 1871 to 1901. Annual averages of month-end figures from 1911. [7] Includes deposits of Federal and Provincial Governments and also deposits elsewhere than in Canada from 1901. [8] 1924. [9] 1922.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded

	Item		1871	1881	1891	1901	1911	1921
	Licensees under the Small Loans Act—							
	SMALL LOANS COMPANIES—							
1	Assets	$	..	..	..	..	..	..
2	Liabilities	$	..	..	..	..	..	..
	MONEYLENDERS—							
3	Assets	$	..	..	..	..	..	..
4	Liabilities	$	..	..	..	..	..	..
	Trust Companies (Federal)—							
	ASSETS—							
5	Company funds	$	..	..	..	..	..	10,237,930
6	Guaranteed funds	$	..	..	..	..	..	8,774,185
	LIABILITIES—							
7	Company funds	$	..	..	..	..	..	9,907,331
8	Guaranteed funds	$	..	..	..	..	..	8,549,642
9	ESTATES, TRUST AND AGENCY FUNDS	$	..	..	..	..	..	79,252,639
	Trust Companies (Provincial)—[3]							
	ASSETS—							
10	Company funds (par value)	$	..	..	..	..	..	31,418,403
11	Guaranteed funds (par value)	$	..	..	..	..	..	32,885,302
12	ESTATES, TRUST AND AGENCY FUNDS	$	..	..	..	..	..	629,953,917
	Dominion Fire Insurance—[4]							
13	Amounts at risk, Dec. 31	$	228,453,784	462,210,968	759,602,191	1,038,687,619	2,279,868,346	6,020,513,832
14	Premium income for each year	$	2,321,716	3,827,116	6,168,716	9,650,348	20,575,255	47,312,564
15	Claims paid during each year	$	1,549,199	3,169,824	3,905,697	6,774,956	10,936,948	27,572,560
	Provincial Fire Insurance—							
16	Amounts at risk, Dec. 31	$	..	..	..	..	..	1,269,764,435
17	Premium income for each year.	$	..	..	..	..	..	5,545,549
18	Claims paid during each year.	$	..	..	..	..	..	3,544,820
	Dominion Life Insurance—[4]							
19	Amounts in force, Dec. 31	$	45,825,935	103,290,932	261,475,229	463,769,034	950,220,771	2,934,843,848
20	Premium income for each year.	$	1,852,974	3,094,689	8,417,702	15,189,854	31,619,626	98,864,371
21	Claims paid during each year	$	..	..	..	6,845,941	11,051,679	23,997,262
	Provincial Life Insurance—							
22	Amounts in force, Dec. 31	$	..	..	..	..	..	222,871,178
23	Premium income for each year	$	..	..	..	..	..	4,389,008
24	Claims paid during each year	$	..	..	..	..	..	2,812,077

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[1] Includes moneylenders. [2] Included with small loans companies. [3] Compiled from data supplied voluntarily to the Superintendent of Insurance by provincial companies and estimated to cover about 90 p.c. of all provincial business. The figures include all the large and most of the small provincial companies. [4] Excludes fraternal insurance.

STATISTICAL SUMMARY OF THE PROGRESS OF CANADA—concluded

1931	1939	1941	1949	1950	1951	1952	1953	
827,373	5,466,679	7,918,926	48,921,948	61,207,841	73,980,068	87,597,097	154,737,883[1]	**1**
823,120	5,424,047	7,918,926	48,921,947	61,207,840	73,980,068	87,597,097	154,737,883[1]	**2**
..	..	11,351,467	24,002,353	27,321,717	30,570,466	46,125,804	[2]	**3**
..	..	11,351,467	24,002,357	27,321,718	30,570,466	46,125,804	[2]	**4**
15,459,347	20,176,418	20,596,781	26,244,737	27,988,873	28,446,331	28,731,666	29,629,779	**5**
25,718,219	36,001,000	38,570,855	90,111,500	93,082,706	93,565,917	107,429,793	110,366,037	**6**
15,066,431	19,351,839	20,086,776	25,892,736	27,568,241	26,658,321	28,583,274	29,048,202	**7**
25,718,221	36,001,000	38,570,855	90,111,501	93,082,707	93,565,917	107,429,793	110,366,037	**8**
215,698,469	242,369,850	268,596,524	560,080,611	494,636,746	543,983,754	588,550,279	631,231,540	**9**
66,338,148	61,292,364	58,165,471	68,188,785	72,736,140	74,399,404	75,097,721	81,569,089	**10**
125,829,165	114,606,960	108,912,208	213,671,444	251,832,240	258,413,136	265,257,221	268,175,625	**11**
1,961,948,175	2,422,219,901	2,418,950,841	2,827,988,797	3,126,058,749	3,282,558,573	3,383,650,088	3,470,781,614	**12**
9,544,641,293	10,200,346,551	11,386,819,286	25,970,407,358	28,957,395,702	33,490,653,184	37,317,499,723	41,703,092,570	**13**
50,342,669	40,984,276	49,305,539	103,809,769	115,648,449	134,496,218	139,777,732	145,971,915	**14**
29,938,409	15,738,902	17,814,322	46,548,822	58,524,685	52,086,541	61,124,918	66,755,144	**15**
1,341,184,333	1,284,998,454	1,120,181,968	2,378,050,919	2,519,157,284	2,887,564,984	2,869,068,710	3,394,406,231	**16**
7,185,066	5,750,302	3,992,765	10,181,704	10,519,555	11,614,247	11,695,251	12,670,659	**17**
4,985,605	3,170,597	2,237,832	5,749,817	6,228,632	6,174,914	5,767,009	6,670,976	**18**
6,622,267,793	6,776,262,587	7,348,550,742	14,408,761,850	15,745,836,067	17,235,583,302	19,090,628,497	21,226,905,619p	**19**
225,100,571	198,042,144	203,459,238	349,813,007	370,091,234	394,019,379	422,698,223	454,786,332p	**20**
56,579,358	73,936,661	75,082,008	117,933,354	122,310,999	128,489,084	130,016,851	136,827,798p	**21**
202,094,301	134,554,434	164,451,218	600,994,643	709,395,888	708,733,573	937,333,486	1,093,568,633	**22**
5,178,615	3,491,402	3,988,952	13,970,109	17,241,427	16,806,502	22,638,816	23,653,050	**23**
2,603,453	3,178,604	2,583,958	5,053,498	6,860,882	6,727,241	8,243,401	8,146,839	**24**

APPENDIX

Federal and Provincial By-elections.—The information *re* federal by-elections and provincial elections stated as included in Appendix I in the footnote to Table II, p. 68 and in the footnote to p. 73 will be given in the 1956 edition of the Year Book and may be secured in the meantime from the Canada Year Book Section, Information Services Division, Dominion Bureau of Statistics.

The St. Lawrence Seaway Authority.—The St. Lawrence Seaway Authority (cf. pp. 97, 100 and 105) was established by Act of Parliament in 1951 and came into force by proclamation of the Governor in Council on July 1, 1954. It is incorporated for the purposes of constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montreal and Lake Erie. The Authority is composed of a President, a Vice-President and a Member and reports to Parliament through the Minister of Transport. (*See also* St. Lawrence Seaway Authority.—1954, p. 1320.)

The St. Lawrence Seaway Authority is a *proprietary Crown corporation* and should be included in the list of such corporations given on p. 99 of this Year Book.

Canadian Government Specifications Board.—The Canadian Government Specifications Board is a co-operative body in which Government and industry participate on a voluntary basis. The Board was formed on June 13, 1934, as the Canadian Government Purchasing Standards Committee, under the auspices of the National Research Council. The Board undertakes the preparation of specifications in commodity fields and for materials, processes and equipment in which government departments and agencies may be interested and arranges for testing and research work.

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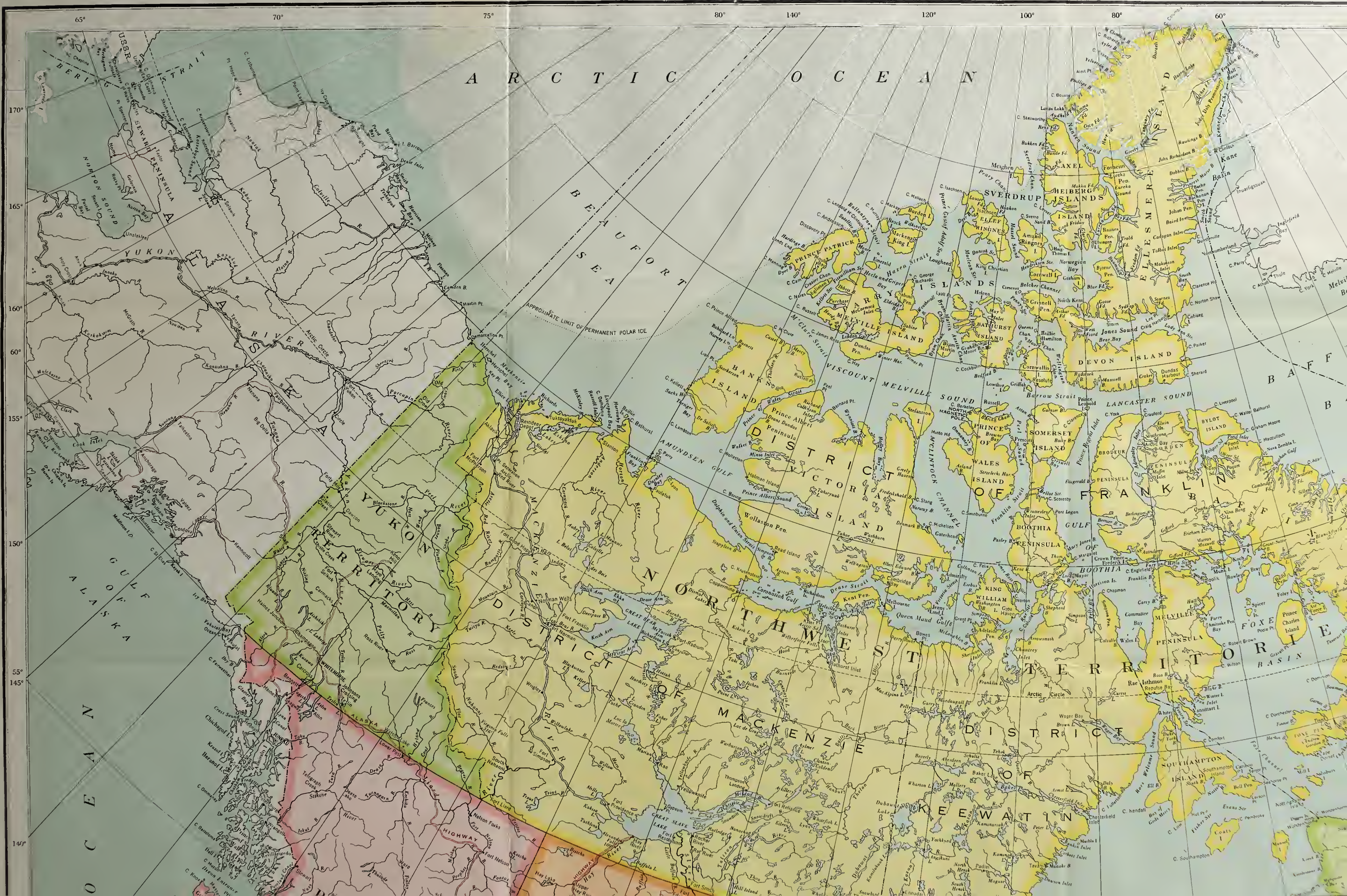
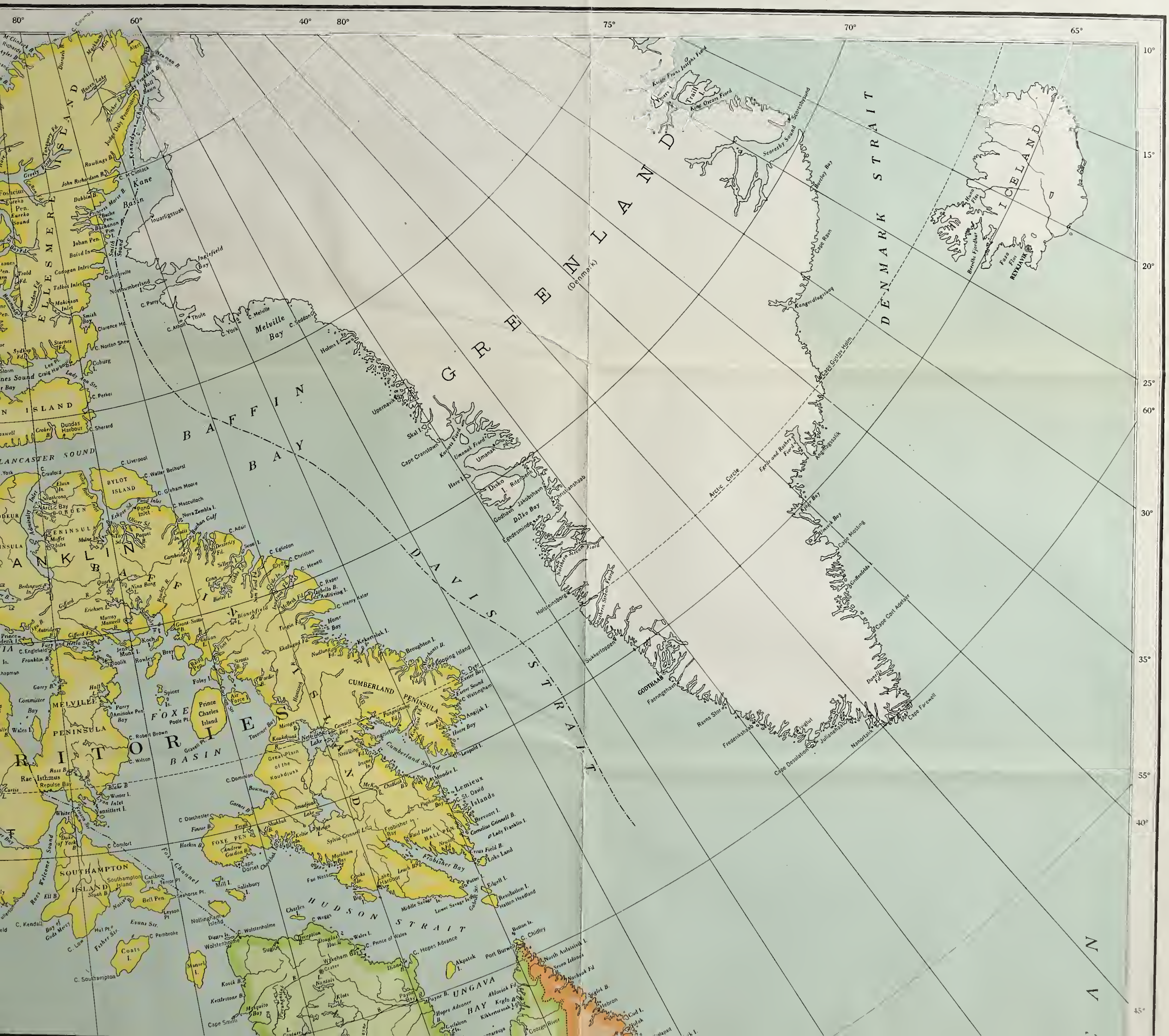


ARCTIC OCEAN
BEAUFORT SEA
APPROXIMATE LIMIT OF PERMANENT POLAR ICE
BERING STRAIT
U.S.S.R.
NORTON SOUND
SEWARD PENINSULA
ALASKA
YUKON RIVER
GULF OF ALASKA
OCEAN
YUKON TERRITORY
WHITEHORSE
DAWSON
NORTHWEST TERRITORIES
DISTRICT OF MACKENZIE
DISTRICT OF FRANKLIN
DISTRICT OF KEEWATIN
GREAT BEAR LAKE
GREAT SLAVE LAKE
BANKS ISLAND
VICTORIA ISLAND
PRINCE PATRICK
MELVILLE ISLAND
PARRY ISLANDS
BATHURST ISLAND
CORNWALLIS I.
DEVON ISLAND
ELLESMERE ISLAND
AXEL HEIBERG ISLAND
SVERDRUP ISLANDS
ELLEF RINGNES ISLAND
AMUND RINGNES I.
PRINCE OF WALES ISLAND
SOMERSET ISLAND
BOOTHIA PENINSULA
GULF OF BOOTHIA
KING WILLIAM ISLAND
MELVILLE PENINSULA
SOUTHAMPTON ISLAND
FOXE BASIN
BYLOT ISLAND
BAFFIN
LANCASTER SOUND
VISCOUNT MELVILLE SOUND
M'CLINTOCK CHANNEL
AMUNDSEN GULF
CORONATION GULF
QUEEN MAUD GULF
Arctic Circle
NORTH MAGNETIC POLE
HIGHWAY
Kane Basin
65° 70° 75° 80° 140° 120° 100° 80° 60°
170° 165° 160° 60° 155° 150° 55° 145° 140°

80°
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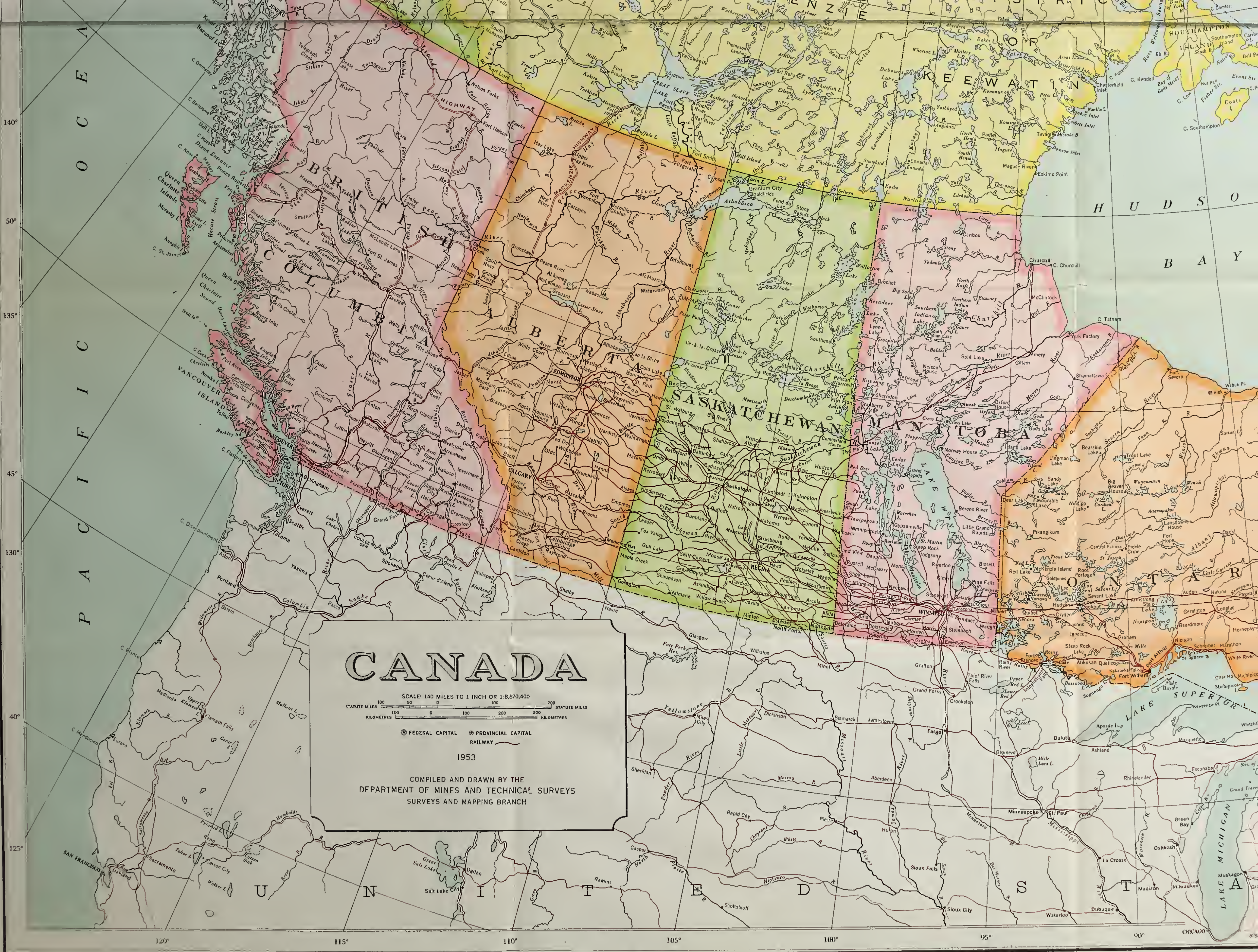
45°
ELLESMERE ISLAND
GREENLAND
(Denmark)
ICELAND
REYKJAVIK
DENMARK STRAIT
BAFFIN BAY
DAVIS STRAIT
HUDSON STRAIT
FOXE BASIN
UNGAVA BAY
LANCASTER SOUND
BYLOT ISLAND
CUMBERLAND PENINSULA
MELVILLE PENINSULA
SOUTHAMPTON ISLAND
FOXE PEN.
HALL PEN.
Prince Charles Island
Kane Basin
Smith Sound
Kennedy Chan.
Melville Bay
Inglefield Bay
Thule
C. York
C. Atholl
C. Parry
Northumberland I.
Holms I.
Upernavik
Umanak Fiord
Umanak
Disko I.
Disko Bay
Godhavn
Jakobshavn
Christianshaab
Egedesminde
Holsteinsborg
Sukkertoppen
GODTHAAB
Faeringehavn
Frederikshaab
Julianehaab
Nanortalik
Cape Farewell
Cape Desolation
Ravns Stor
Ivigtut
Arctic Circle
Angmagssalik
Cape Gustav Holm
Kangerdlugssuaq
Cape Ravn
Scoresby Sound
Scoresbysund
King Oscars Fiord
Kejser Franz Josephs Fiord
Ymers I.
Traill I.
Cape Dan
Umivik Bay
Lindenow Fd.
Cape Cort Adelaer
Cape Mosting
Dannebrog
Cumberland Sound
Frobisher Bay
Resolution I.
Pangnirtung
Home Bay
Pond Inlet
Arctic Bay
Admiralty Inlet
C. Dorset
Nottingham Island
Salisbury I.
Mill I.
Coats I.
Mansel I.
C. Chidley
Button Is.
Port Burwell
Akpatok I.
Sugluk
Wakeham Bay
C. Wolstenholme
Repulse Bay
Rae Isthmus
Committee Bay
Igloolik
Fury and Hecla Str.
Dundas Harbour
Craig Harbour
Jones Sound
Clarence Hd.
Fosheim Pen.
Eureka Sound
Alert
Hall Basin
Judge Daly Promontory
Newman B.
Kekertaluk I.
Broughton I.
Exeter Bay
Lemieux Islands
Loks Land
Hatton Headland
Faroa Flói
Breida Fjordhur
Huna Flói



CANADA

SCALE: 140 MILES TO 1 INCH OR 1:8,870,400

STATUTE MILES 100 50 0 100 200 STATUTE MILES

KILOMETRES 100 0 100 200 300 KILOMETRES

FEDERAL CAPITAL
PROVINCIAL CAPITAL
RAILWAY

1953

COMPILED AND DRAWN BY THE
DEPARTMENT OF MINES AND TECHNICAL SURVEYS
SURVEYS AND MAPPING BRANCH

PACIFIC OCEAN
BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
KEEWATIN
HUDSON BAY
UNITED STATES
LAKE SUPERIOR
LAKE MICHIGAN
LAKE WINNIPEG
VANCOUVER ISLAND
Queen Charlotte Islands
EDMONTON
REGINA
WINNIPEG
VICTORIA
Vancouver
Calgary
Saskatoon
Churchill
Fort William
Port Arthur
Seattle
Portland
Spokane
San Francisco
Salt Lake City
Minneapolis
St. Paul
Duluth
Bismarck
Fargo
Sioux Falls
Sioux City
Chicago
120°
115°
110°
105°
100°
95°
90°
140°
135°
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125°
50°
45°
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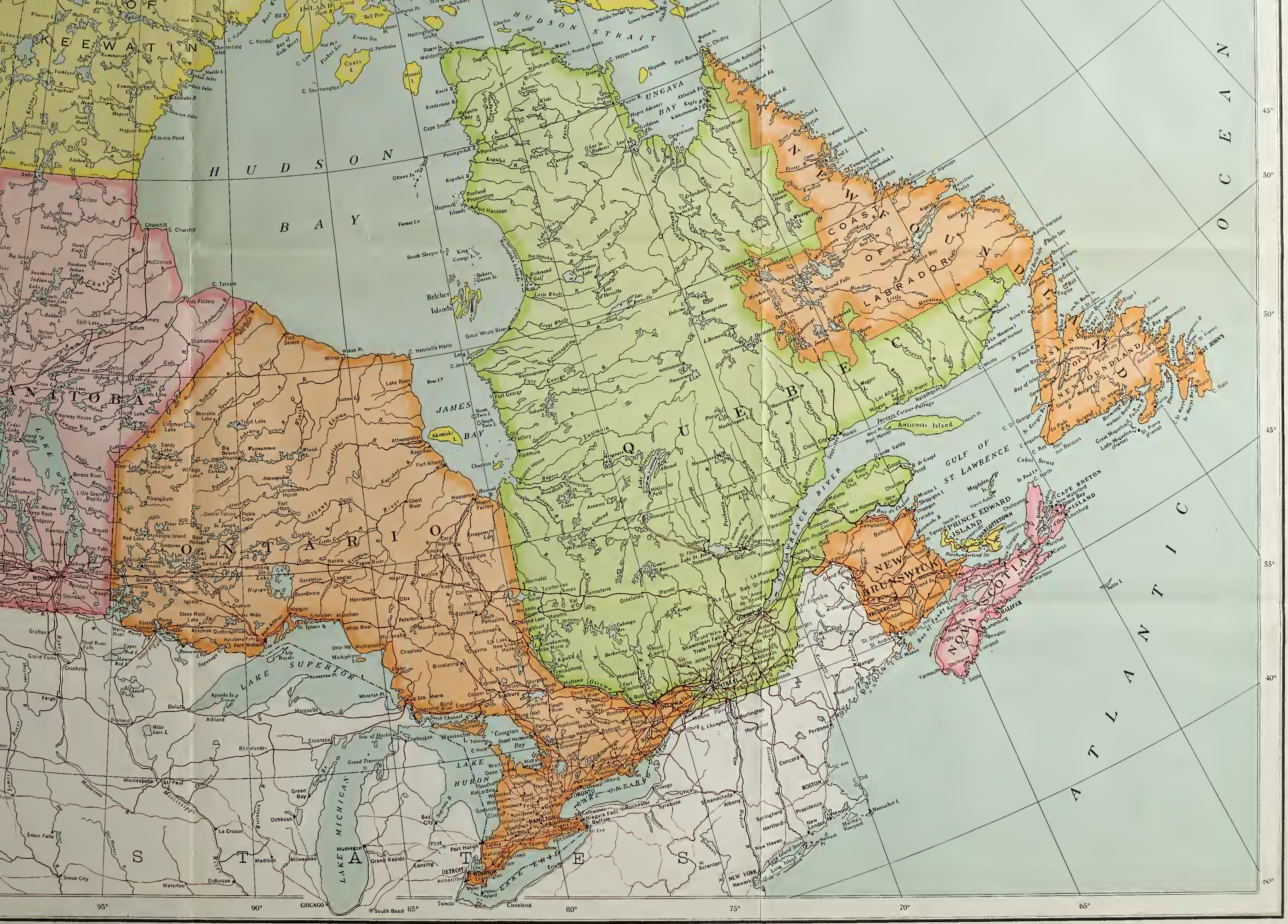
KEEWATIN
HUDSON STRAIT
UNGAVA BAY
HUDSON BAY
JAMES BAY
MANITOBA
ONTARIO
QUEBEC
COAST OF LABRADOR
NEWFOUNDLAND
NEW BRUNSWICK
NOVA SCOTIA
PRINCE EDWARD ISLAND
CAPE BRETON ISLAND
GULF OF ST. LAWRENCE
ST. LAWRENCE RIVER
Anticosti Island
Belcher Islands
Akimiski I.
Coats I.
Mansel I.
LAKE SUPERIOR
LAKE MICHIGAN
LAKE HURON
LAKE ONTARIO
LAKE ERIE
LAKE WINNIPEG
Georgian Bay
Cabot Strait
ATLANTIC OCEAN
UNITED STATES
Churchill
York Factory
Fort Severn
Moosonee
Winnipeg
Port Arthur
Fort William
Sault Ste. Marie
Sudbury
Ottawa
Toronto
Hamilton
Montreal
Quebec
Fredericton
Charlottetown
Halifax
St. John's
Sherbrooke
Trois Rivières
Detroit
Windsor
Buffalo
Cleveland
Chicago
Boston
New York
Duluth
Minneapolis
St. Paul
95°
90°
85°
80°
75°
70°
65°
45°
50°
55°
40°

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